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**PATHOLOGICAL ESSAYS ON SOME DISEASES OF THE HEART;** *being the Substance of Lectures delivered before the College of Physicians.* By P. MERE LATHAM, M.D., Physician to St. Bartholomew's Hospital.

ESSAY V.

*Clinical History of Inflammation of the Pericardium.*

Acute inflammation of the pericardium may arise as a simple unmixed disease, or as a part of more general inflammation within the thorax, as, when the lungs or the pleura are affected; or in association with disease pervading numerous and distinct parts of the body, as rheumatism.

As a simple and unmixed disease, it is (I should conceive, judging from my own observation) of rare occurrence; as a part of more general inflammation within the thorax not very common; but, associated with rheumatism, very frequent indeed.

The diseases of the pericardium, for reasons already mentioned, submit themselves more readily to clinical diagnosis than the diseases of other parts of the heart. Nevertheless, they are beset with their own perplexities which are more considerable than any belonging to the same class of diseases, (the inflammatory,) in other organs of the body. These perplexities, however, form as much a part of their clinical history as do their more direct and obvious symptoms, and they claim to be as distinctly notified.

One of the children at Christ's hospital had, in the opinion of all who saw him, the severest inflammation of the brain. The attack was sudden, with great heat and frequency of pulse. He had delirium and convulsions, and pointed to his forehead as the seat of his pain. In three days he died, and upon dissection not a vestige of disease was found within the cranium; but the heart was exclusively the seat of the disease, and no other part of the body discovered the slightest morbid appearance. The disease of the heart was not confined to its investing membrane. It was the most intense inflammation pervading both the pericardium and the muscular substance. This is

the same case of which I have already related the appearances upon dissection, for the purpose of illustrating the occurrence of inflammation in several structures equally and simultaneously, but I reserved its anomalous symptoms for separate consideration. It occurred twelve years ago. I became acquainted with it through Mr. Stanley, and related it at the time to several of my medical friends; but they looked so incredulous, or rather so contemptuous, of the man who could mistake an inflammation of the pericardium and heart for an inflammation of the brain, that I said no more about it. But twelve years have greatly augmented the number of those who prosecute pathological inquiries by means of dissection; and now, when I venture to mention this case, there are many, I am sure, who can bear testimony to facts of the same kind. But this was a case where, not the pericardium merely, but the whole heart was inflamed.

In the course of last year there was a case of acute rheumatism at St. Bartholomew's hospital in which the whole force of the treatment was directed to the head, from a belief that the brain was inflamed. Upon dissection, the brain and its coverings were found in a perfectly healthy and natural state; and the pericardium, towards which during life there was no symptom to direct the slightest suspicion of disease, discovered the unequivocal marks of recent and acute inflammation.

M. Andral, in his admirable "*Clinique Medicale*," states a case where there was delirium, general convulsive movements, and twitching of the tendons, during three days. On the fourth day the delirium ceased, but the convulsive movements continued, and the upper extremities were thrown from time to time into a sort of tetanic spasm. On the fifth the delirium returned, and the upper extremities became paralytic; afterwards the patient passed into a comatose state, and died. Upon dissection, neither the brain nor the spinal marrow, nor any covering or appendage of either, nor any other organ of the body, presented the least trace of disease, except the heart. The morbid appearances belonged solely and exclusively to the pericardium, and consisted of lymph deposited upon its surface, which had contracted slight adhesions, and

some ounces of a green and flaky serum effused into its cavity.\*

These cases furnish specimens of the enormous difficulties which medical men have sometimes to contend with in the diagnostic part of their art, and they ought to mitigate the censure of those who would judge harshly of our mistakes.

Here it is remarkable, first, that a vital organ should sustain an acute inflammation without any symptom whatever immediately referrible to itself, and that organ the heart: and, secondly, that it should impart expressly to another organ, not the mere symptoms of common derangement, but the authentic symptoms of inflammation, and that organ the brain.

It is very conceivable that inflammation may creep slowly on a part, and injure its structure by little and little, and yet the part give no notice of its morbid condition by any notable disturbance of its sensibilities and functions. Daily experience furnishes examples of the fact even in the heart itself; but in proportion as the disease is more acute and expressly limited to one organ, and that organ is more essential to life, experience would lead us to expect that its proper and definite symptoms would be present from the first.

Again, if the symptoms be not prominently declared in the organ affected, experience would lead us to look for them in parts between which and that organ there is a relative dependency of function. If the kidney be diseased, and there be not a certainty of the fact, from symptoms immediately belonging to itself, there may still be a strong probability of it from symptoms which belong to the bladder. If the heart be diseased, and its own symptoms do not declare the fact, it is often suggested by symptoms which arise through the medium of the lungs.

But diagnosis is necessarily perplexed and baffled where no symptoms whatever are found in the organ really diseased, and none in those with which it is functionally allied, but in some other organ with which it has no known connexion, save that they are both parts of the same body. And, further, a just diagnosis becomes absolutely hopeless when the organ, thus suffering sympathetically, puts forth, not the signs of a mere indefinite ailment, but of a real disease, changing and disorganizing its structure: as when the brain, being perfectly healthy, manifests the signs of acute inflammation, while the heart, being acutely inflamed, gives no evidence of its disease whatever.

But, leaving the consideration of these hopeless perplexities, we will pass to other difficulties in the diagnosis of pericarditis, which rather cause its existence to be occasionally overlooked than that it should be mistaken for another disease.

Unquestionably I have seen it entirely overlooked when it has been the sole disease, and the sole cause of death. A few instances have occurred within my knowledge of individuals having been picked up in the street, and been sent into the hospital in a dying state, who, nevertheless, have survived for a few days, and afforded time to investigate the conditions of their disease. Nothing, however, was made out concerning them but that they were dying; and not the least conjecture could be formed where their disease was, or what it was. Upon dissection, the pericardium was found covered with lymph, and its cavity distended by turbid serum.

But perhaps it is hardly fair to bring these forward as cases in which the disease has been overlooked, inasmuch as it is scarcely possible that it could have been discovered. Where a fair opportunity is afforded of observing it, the cases, I believe, are very rare in which pericarditis is overlooked entirely, but they are by no means unfrequent in which it is overlooked partially, and for a time.

Now, the common difficulties attending its diagnosis may be referred partly to the variableness of its own symptoms and partly to the variableness of the manner and circumstances under which it is combined with other diseases.

Disease belongs most unequivocally to the heart when pain is immediately referred to it, and when its action is disturbed. And when there is fever withal, it bespeaks the essence of the disease to be inflammatory, and fixes it, almost to a certainty, in the pericardium. But why in the pericardium more than in other parts of the heart? Because it is matter of experience, that above all others the pericardium is liable to acute inflammation in an incalculable proportion.

But, strange to say, the pericardium may be acutely inflamed and yet there may be no pain. And the disturbance of the heart's action is so little of one kind in all cases, that no certain mode of disturbance can be relied upon as a diagnostic symptom; and though fever may be present wherever there is pericarditis, there is often, at the same time, inflammation of some other organ out of which it may arise.

The disease with which pericarditis is most frequently found in association is acute rheumatism; so frequently in children and in young people, that in them our suspicions are always alive to its occurrence. Yet we know not when to expect it, or what to regard as a warning of its attack. It is incident to all the degrees, and all the stages, and all the forms of acute rheumatism. It is not more to be looked for when the disease is severe than when it is mild; more at its beginning than during its progress and decline; more when it is shifting and inconstant in its seat than when it is fixed and abiding.

Still I am persuaded that, in the great majority of cases, pericarditis may be and is detected time enough to allow the application

\* *Clinique Medicale*, v. 3, 444; also, *Rostan sur Ramollissement du Cerveau*, 233.

of remedies for its cure, both when it occurs alone and in all its combinations.

It is true that the symptoms of one case (even the most prominent and obvious symptoms) may differ from those of another; but every such difference need not be a cause of embarrassment.

In one case the heart, by the violence of its contractions, will knock against the ribs and shake the chest; and this tumultuous action will continue as long as the disease continues, and undergo no considerable abatement but by cure or by death. In another, the heart will contract so feebly that its pulsations can hardly be heard or felt. With the diminution of force the heart's action will become strangely irregular, and with the augmentation of force it will maintain a constant regularity. But these differences are capable of being explained by the essential conditions of the disease: and why, then, should they embarrass our diagnosis? Again, in one case of pericarditis, such a posture of body seems to be required as will leave the chest free to expand itself, and nothing more. The patient lies upon his back, with his shoulders a little elevated, and being so placed he is unwilling, rather than unable, to stir; and he is unwilling because motion excites the action of the heart and hurries the respiration: and during the whole course of his disease he will retain the position with which he began, and still lie constantly on his back. In another, the patient will raise the trunk of his body erect, or bend it a little forwards towards the knees. In another, he will lie strictly on the right, and in another strictly on the left side. But the strangest anomaly is, that the same patient who, at one period of his disease, has fixed himself immoveably on the left side, will, at another, be forced to turn over and fix himself as immoveably on the right.

All these several positions, with the exception, perhaps, of that on the back, are positions of absolute constraint. The necessity of accommodation to any one of them (whatever it may be) is so urgent, that the patient is not merely unwilling, but feels as if it would be instant death to him to move.

Now, that the rhythmical as well as the irregular pulse, the forcible as well as the feeble pulse, and that every variety of bodily posture should be incident to inflammation of the pericardium, would seem to create a strange perplexity in its diagnosis: a perplexity which mere clinical observation, unaided by morbid anatomy, never could have been able to resolve. Reason and common sense seem to declare that there cannot be the same disease of the same organ, and yet the most prominent symptoms be absolutely different. But morbid anatomy is not content merely to contemplate a disease in its general character and have done with it: it takes into account also the various morbid products and changes of structure accompanying it or resulting from it. In pericarditis it takes cognizance of the lymph deposited upon the surface, and of the fluid effused into the cavity of the pericar-

dium; the different quantities of each in different cases, and the different proportions which they bear to each other. It notices also, that the lymph sometimes contracts a partial and sometimes a complete adhesion, and sometimes none at all; that the fluid is sometimes freely effused into the pericardium and envelops the whole heart, and is sometimes limited by adhesions to a part of it.

These conditions must influence the action of the heart in various ways; and morbid anatomy, knowing these things, suggests to clinical observation, with respect to pericarditis, that, as its products are different, so too must its symptoms be in different cases, and even in the same case at different periods.

In pericarditis a vast difference arises in respect to symptoms, according as the solid or the fluid products of inflammation predominate. It is in consequence of the products of the inflammation consisting chiefly of solid coagulable lymph, and of that lymph quickly producing a complete adhesion of the pericardium, and thus preventing the possibility of fluid being effused into its cavity, that the force, and even the regularity, of the heart's action, with which the disease began, is continued throughout its whole course, and that there is no absolute necessity of accommodating the trunk of the body to one constrained position.

On the other hand, it is in consequence of the products of the inflammation consisting chiefly of fluid, whereby adhesion is prevented, and of the fluid continuing to increase, that the heart's action, from being violently excited, becomes soon scarcely perceptible, and fluttering and irregular; and that to swerve from one constrained position is at the peril of instant death.

Further, in pericarditis a vast difference arises in respect to the period during which life is capable of being sustained, according as the solid or fluid products of inflammation predominate. If pericarditis be not immediately cured, it will depend upon this contingency whether it do or do not prove immediately fatal. Where the heart suddenly loses the force and rhythm of its action, and flutters and falters, and stops, and gasping and fainting follow the least deviation from a given position, the patient will be quickly dead, if, by virtue of your remedies, you do not quickly change the conditions of his disease; and, being dead, you will find the heart floating in the fluid which distends the bag of the pericardium. But where the heart still maintains the force and rhythm of its action, without any very urgent necessity of accommodating the body to one position, (conditions which are consistent with the most acute inflammation,) your patient will not die immediately, although your remedies do not procure the least mitigation of his disease: but he will continue to live probably for some weeks, and will then die, as if he were exhausted by the violent action of his vascular system; and being dead, you will find no fluid in the pericardium, but solid lymph accumulated upon it, in quan-

tity proportionate to the duration of the disease.

In these ways will acute pericarditis terminate, if it be left to itself, or be uninfluenced by the remedies used: death ensuing sooner or later, according as the fluid or the solid products of inflammation predominate.

Now, to ascertain, as far as possible, the natural course and termination of a disease, opens the way to a clear understanding of the natural processes of its reparation, and to rational methods of treating it.

But it may be said that, in the strictest sense, the natural course and termination of pericarditis never can be ascertained. For it is not exactly one of those diseases in which the physician is accustomed to look on and do nothing; and although, in many cases, his remedies may fail to save life, it can hardly be supposed that in any they have not some influence upon the character of the disease.

The fact hardly admits of certain proof, whether they have or have not. Nevertheless, practical men have a moral conviction that cases do frequently occur where a disease, being treated by the most active remedies from the beginning, has, notwithstanding, proceeded and terminated in the same manner as it would have proceeded and terminated, if it had been left to itself.

Purulent ophthalmia may be mentioned as an instance. Its natural course and termination having been sufficiently ascertained from cases to which no remedy has been applied. The whole conjunctiva becomes intensely red; an enormous purulent secretion takes place from every part of its surface, and an enormous collection of serum in the whole cellular texture beneath it. The inflammation spreads to contiguous structures; the cornea sloughs and bursts, and the eye is gone for ever. This is the course and termination of purulent ophthalmia, when it is left to itself. But a thousand instances might be quoted where the same inflammation, treated from the beginning by the most active remedies, has proceeded and ended in the same way.

Now I cannot say that I ever saw any known case of acute pericarditis left entirely to itself. But I have seen cases where, to the best of my belief, the remedies employed had not in the slightest degree disturbed the natural progress and termination of the disease. That this is a possible event the history of purulent ophthalmia sufficiently proves.

But pericarditis, in its most acute form, whether it occur alone, or accompanied by pleurisy or peripneumony, or as a part of rheumatism, is capable of complete cure.

In all cases, however, a considerable period must elapse before the certainty of such a cure is established. I do not mean to say, that the process of reparation is in itself necessarily tardy: I rather think that it is not so. But, whether it be rapid or slow, the time must necessarily be long before the physician can gain all the evidence he requires, to convince himself that the reparation is complete. In fact, the patient must first have returned to

the habits and occupations of health, and the physician must know whether the heart can bear the stimulus of healthy exertion, before he can feel an assurance that it is free from disease.

In the worst cases, these three symptoms—the faltering pulse, the constrained position, and the threatening syncope, which arise simultaneously—are thought to depend essentially upon the same morbid condition; namely, effusion of fluid into the pericardium, and these, when they disappear (as they often do) simultaneously, give evidence that this same morbid condition is abated or removed; namely, that the fluid is absorbed, or is in the course of absorption. One may pronounce with tolerable certainty, from the observation of symptoms, that reparation has proceeded thus far.

But there may still be pain in the region of the heart, and the action of the heart may be excessive; and these symptoms, accompanied by fever and a particular anxiety, denote that inflammation is going on, and (since inflammation, if it is not secreting fluid, is depositing lymph) assuredly, as long as they continue, a greater and a greater accumulation of lymph is taking place upon the pericardium.

Now, by keeping the attention steadily fixed upon these symptoms, it is possible to form, I will not say a certain opinion, but a reasonable conjecture, as to the period when the inflammation ceases, and the stop is put to the further accumulation of lymph.

Their entire disappearance simultaneously would furnish the most satisfactory evidence of what we desire. But this seldom happens. Yet there is something short of this: there are changes in their form and character which furnish good reason for believing that the disease is no longer progressive.

Practical men know a distinction between the merely hurried circulation and the strong impulse and sonorous contraction of the heart; and they know a distinction also between mere general uneasiness about a part, and a fixed, undeviating pain, within it. When, therefore, in pericarditis the strong impulse and sonorous contractions of the heart are gradually exchanged for a merely hurried circulation, and the fixed, undeviating pain in the heart becomes a more general uneasiness about it, and, at the same time, the peculiar anxiety which has been mentioned, is less and less apparent, we may pronounce, with some confidence, upon the decline of the inflammation.

But let it be borne in mind that neither the decline of the inflammation, nor its absolute cessation, are the same thing with a reparation of the injury done to the organ. Reparation implies that no lymph remains upon its surface, and that the folds of the pericardium do not adhere. But lymph, organized lymph, adhesion, complete and permanent adhesion, may still subsist after the inflammation has entirely passed away.

In pericarditis, where the patient survives, and when we have come to the conclusion that

the inflammation has altogether ceased, there will still remain the more important question to be determined—is the reparation complete? As long as, with every advantage which the most perfect quiet can procure, the heart's action is not reduced to the force and measure of health, so long it is reasonable to believe that it is not complete. And even, when the heart's action cannot be discovered to be otherwise than healthy, it is still not unreasonable to doubt whether reparation be yet complete, until the patient has resumed his ordinary occupations.

The cases of pericarditis have not been few which I have known discharged from hospitals as perfectly cured; and indeed, from present circumstances, they might well be presumed to be so. Yet in a short time these same patients have returned, complaining of severe palpitations, which arose as soon as they resumed the habits and occupations of health. The quiet of an hospital has again restored them. They have been again discharged, and have again soon returned with the same complaint.

The ability to do and bear all that the man could do and bear in the days of his health, is the surest criterion that the heart has undergone perfect reparation after an attack of pericarditis.

There is one symptom derived from the new method of auscultation to which I desire expressly to direct the attention of medical men. When in acute rheumatism the pericardium becomes inflamed, the contraction of the ventricles is accompanied, or immediately followed, by a distinct whizzing noise, which is perceptible to the ear immediately applied to the chest, or by help of the cylinder. It is the "*bruit de soufflet*," as the French call it; the noise of the blowing of bellows.

I am not called upon to determine the general value of auscultation, as an aid to diagnosis. Probably it does not deserve all the high commendation of its inventor, and its early advocates, and still less the absolute contempt and rejection which it has incurred at the hands of others. I confine my remarks to a single sign derived from it, contributing something, I believe, towards the diagnosis of a particular disease; and am content to affirm, that during more than three years in which I have practised the method of auscultation with some diligence, and, as a security against self-deception, have admitted no result of my own observation which has not been confirmed by that of others, the sign in question, of the peculiar sound accompanying the contraction of the ventricles, has not been absent in any one authentic case of rheumatic pericarditis. And in three years the number of such cases in so large an hospital as St. Bartholomew's is considerable.

My observation is restricted to *rheumatic pericarditis*. The same sign may attend pericarditis arising under other circumstances; but I do not know that it does.

In rheumatic pericarditis the *brouissement*, or *bruit de soufflet*, is always among the ear-

liest symptoms referrible to the heart, and sometimes the very first. Having once appeared, it never subsides but with the complete reparation of the organ. The heart may resume its natural action; all pain and all hurry of respiration may cease, and the patient, as long as he remains quiet, may believe himself well; yet the *brouissement* may remain: and if so, his return to the habits and exertions of health will bring back palpitation and other symptoms which bespeak the certainty of mischief still abiding in the heart.

It is a disease in which there is no medium between complete reparation and certain death; it is a disease which continues for a very brief space of time within the possibility of cure; and, moreover, it is a disease which cannot be successfully combated by common remedies. I will mention what my opportunities of observation have taught me concerning its treatment in its earliest stages, the period at which alone it admits the salutary impression of any remedy.

It has been already said, that acute pericarditis will proceed sometimes uncontrolled to its fatal termination, in spite of the most active medical treatment.

There are conditions of inflammation, (how far they belong to the inflammation itself, and how far to the part it occupies, it would be difficult to determine) but there are conditions of inflammation, which simple depletion, under the most favourable circumstances, is totally inadequate to surmount. When these conditions occur, (and indeed they do occur with sufficient frequency,) medical men must be content to look on and witness, in spite of their efforts, the inevitable destruction of organs, if they did not possess a remedy upon which they could rely, reaching beyond the curative influence of mere depletion, and capable of supplying its defects.

The remedy is mercury.\* But the conditions of inflammation requiring its administration can no further be defined than that they are connected, in some manner, with the deposition of lymph in certain parts of the body; and one of these parts is the pericardium.

From acute pericarditis, which has proceeded to the deposition of lymph, nothing, I believe, can ensure a perfect recovery, but mercury so employed as to produce its peculiar and specific influence upon the constitution; mercury producing salivation. I would not hazard this assertion unless I firmly believed that the fact was brought as near to demonstration as the nature of things will allow.

I know that common remedies alone will often succeed in arresting the progress of the inflammation, but not always. I know that common remedies alone will often rescue the life of the patient, but that, unaided by mer-

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\* I owe my knowledge of this remedy to Dr. Farre, sixteen years ago.

cury, they will not procure a perfect reparation of his disease. To arrest the disease and to rescue the patient's life would seem quite enough for us to expect from any remedy. In parts not vital it may be enough. After the inflammation of a limb, tendons may be left adherent to their sheaths, and cellular substance thickened and glued together, and joints in a state of ankylosis, whence an inconvenience arises, but no peril. But after an inflammation of the pericardium has absolutely ceased, and the patient's life is saved for the present, if the adhesions remain, death will nevertheless be its consequence in the end. This will be explained hereafter.

It has been remarked, as an evidence of some strange caprice in medical opinion and practice, that mercury, which a few years ago was only employed as a specific for a single complaint, should now be resorted to in very many diseases incident to the human frame. But, indeed, it is no caprice, but the advance of sound pathological knowledge, which has done this. Formerly, every disease had its own proper remedy, and there were as many remedies as diseases. But then, what were diseases but names, and what were remedies but a number of mysterious agents directed to no definite purpose? Sound pathology, however, which has been continually diminishing the number of nominal diseases, and reducing them to a few simple principles of morbid action, has at the same time greatly abridged the catalogue of medical agents. For that rational practice which is founded on it is conversant with no other remedies, except those which are capable of fulfilling plain and definite indications—indications few in number, but of vast comprehension, since they respect a few principles of morbid action involved in a thousand nominal diseases.

Now mercury is one of these remedies. But it may be asked—what are the plain and definite purposes which mercury can fulfil, that it should have become a medical agent of such extensive use?

One purpose (and that which I am at present concerned to explain) is, that it arrests the deposition, and promotes the absorption of lymph in acute inflammations. The most obvious example in attestation of the fact is found in inflammation of the iris. It is not merely in syphilitic inflammation of the iris, but in inflammation arising under any circumstances, which proceeds to the deposition of lymph, that mercury, pushed to the extent of producing salivation, is required, to rescue the patient from blindness. As soon as the mouth becomes sore, and not sooner, the red cluster of blood-vessels which tended to the margin of the cornea becomes paler and paler; the drops of lymph which studded the surface of the iris cease to increase, and then begin to lessen, and gradually disappear. The aqueous humour becomes clearer; the pupil, which was rendered irregular by partial adhesions, recovers its circular form, and vision is perfectly restored.

In the eye we may behold the miniature of

all diseases. For here nature has displayed, as in a glass, all the little intimate details of her own wonder-working powers: her modes of disorganizing, and her modes of repairing; and the aids which she receives, and the impediments which she sustains, from the right and wrong application of medical agents.

There are inflammations of internal organs, which bear a striking correspondence to inflammation of the iris, in being characterized by an extensive deposition of coagulable lymph, and requiring mercury for their cure. The most frequent and the most notorious example is found in pericarditis—that pericarditis especially which accompanies rheumatism. Here the symptoms during life are those which have been already mentioned, as strongly indicating the predominance of the solid over the fluid products of inflammation: and here dissection after death uniformly discovers solid lymph upon the pericardium, with very general or complete adhesion.

Of rheumatic pericarditis, treated by common antiphlogistic remedies, unaided by mercury, these (as far as I have had the opportunity of observing,) have been the results—the fatal results. Sometimes the disease has proceeded, entirely unchecked, to its fatal termination, and the patient has died, exhausted by the violent action of his vascular system, in the course of two or three weeks. Sometimes the disease has been checked, but only checked; for although the force of the circulation has been abated, the action of the heart has never returned to the measures of health. Sometimes the disease has been apparently cured: the force of the circulation has been not merely checked, but the action of the heart could not be distinguished to be otherwise than healthy except to those who scrutinize its action by the ear; who, if the pericardium really adhere, will never fail to discover the brouissement which may be the only symptom of its disease. Yet this deceptive cure has continued only so long as the patient has been submitted to the restrictions of an invalid; as soon as he has returned to the habits and occupations of health, the heart has again begun to palpitate, and given certain evidence of its permanent disease.

These results have been most strikingly confirmed to me by some miserable cases which have lately come under my own observation and treatment; cases in which the constitution was insusceptible of the impression of mercury; and, consequently, no resource remained for the cure of the disease.

Early in an attack of acute rheumatism, a boy, 12 years of age, manifested the unequivocal symptoms of inflammation of the pericardium. Antiphlogistic remedies, and counter-irritants, and mercury, were all seasonably employed. The mercury failed to produce salivation: the boy survived three weeks. In the meantime the inflammation was in full activity; and he died, as if exhausted by the vehement impulse of his heart and arteries. Upon dissection, the pericardium was found

almost universally adherent. The coagulable lymph, which was the medium of adhesion, was nearly a quarter of an inch in thickness; and when the lymph was detached from the pericardium, this membrane was generally smooth and white, and here and there distinguished by bloody points. The muscular structure of the heart was of a pale yellow colour, and soft of texture. Of this latter appearance, as connected with pericarditis, more will be said hereafter. From the symptoms during life, and from the morbid appearances upon dissection, there is good reason for believing that the inflammation of the pericardium was still going on, and that coagulable lymph still continued to be effused up to the period of the patient's death. Mercury was employed from first to last, but it produced not the slightest appearance of salivation. The disease proceeded and terminated, as it probably would have done if it had been left entirely to itself, and no remedy whatever had been employed.

A girl, 10 years of age, suffered an attack of acute rheumatism, which was not very severe: it had already endured for several weeks, when she was admitted into St. Bartholomew's hospital. At the time of her admission, the swellings had subsided, but there was still some pain in the ankles and knees, and some stiffness of the neck; and there was still some fever. She had complained of no uneasiness in the chest, and no palpitation, from the commencement of her disorder to the present time. When she was settled in the hospital she did not throw off the relics of her complaint, as might have been expected. She remained feverish and uneasy, but without any symptoms which could justify a belief of inflammation attacking the pericardium, until the sixth day after her admission. On this day she complained of catches of the breath, and stitches in the left side. The fever was greatly increased; the pulse greatly accelerated; and the heart contracted with a loud and forcible impulse. Of these symptoms I was informed as soon as they declared themselves, and not an hour was lost in resorting to the remedies thought necessary for their relief, to common antiphlogistic remedies, and to mercury, for the purpose of salivation. Venesection, leeches, blisters, were employed successively and repeatedly; and each of these remedies had its beneficial effect. The venesection abated the force of the heart's action, and the jerking of the pulse, again and again; and the leeches and blisters again and again abated the pain in the side, and the hurry of respiration. But the palpitation of the heart, and the jerking pulse, the pain and hurried breathing, again and again returned. It seemed as if these remedies were sufficient for procuring present relief, but as if something more was wanting to render the relief permanent. This, it was hoped, would presently be ensured by the mercury; but one day passed after another, and still there was no perceptible effect of mercury upon the gums. In the meantime the symptoms conti-

nued their frequent interchange of remissions and aggravations. The mercury was at first given internally only, in the form of calomel; afterwards, by inunction also. But, after eighteen days, during which it was constantly employed, it had not produced the least perceptible ptyalism. It was in vain therefore to insist upon its further use: for, in this disease, certain as the remedial effect of mercury is known to be, it is no less certain that this effect is restricted to the condition of its specific impression upon the constitution being rapidly produced. The cure of the disease was now as far beyond the reach of mercury as of all other remedies.

But in this case it could not be said that the means employed had done nothing. At the end of three weeks the patient not only survived, but her life was no longer in jeopardy from day to day; the symptoms were reduced from their general character of severity, and their exacerbations were less violent, and at more distant intervals.

This patient remained in the hospital ten weeks, and for several weeks before she was discharged she was able to move about the ward; but a hurried breathing, and a forcible and sonorous action of the heart, were constantly present, which, with a peculiar anxiety of countenance, left no doubt of a permanent and incurable disorganization, which, sooner or later, must terminate fatally.

Another case must be added to illustrate the apparent cure of rheumatic pericarditis by common antiphlogistic remedies, without the aid of mercury; the failure and deceptiveness of which is revealed as soon as the patient returns to the habits and occupations of health.

My office of physician to a large hospital has made it my first professional duty to assist the studies of those who resort to it for instruction; accordingly, having one day ventured to state my belief to the pupils, that mercury was essential to the cure of rheumatic pericarditis, and their minds being turned to this interesting subject, Dr. Roupell informed us, that he had not long ago seen a case (and his account was confirmed by others who had seen the same case) in which the disease, in its severest form, had entirely yielded to common antiphlogistic remedies and counter-irritants. Of these a large seton, inserted in the left side, appeared the most strikingly beneficial, and the patient left the hospital, according to the testimony of all observers, perfectly well.

My entire confidence in the accurate observation of Dr. Roupell, and the concurrent belief of all who had seen the case, would not allow me to doubt of its reality, and it became me ever afterwards to guard my doctrine with a proper respect for this special exception.

Not long after this occurrence was made known to me, there appeared among the candidates for admission to the hospital, a poor girl, with a pale and most anxious countenance, a hurried respiration, and a short and

frequent cough, and with the heart bounding and striking against the ribs with unusual force and frequency. Being removed into the ward, she was recognised as the individual who had furnished the notorious example of pericarditis *cured* without the aid of mercury.

Upon inquiry it was found that soon after her dismissal from the hospital, when she returned to her ordinary occupation, she became sensible of her heart beating with unnatural force; but this simple palpitation was all she suffered. It became constant, and capable of being considerably aggravated by any exertion; still she had no complaint beyond simple palpitation, until, three weeks ago, she was again attacked with pain and swelling of the joints, attended by fever, whereupon difficulty of breathing and pain in the region of the heart, and cough, were added to a severer degree of palpitation.

In two days after her reception into the hospital her general rheumatic symptoms subsided; but the symptoms referrible to the heart were unabated and very severe. It was necessary to attempt their relief. Leeches and blisters were applied again and again, and all the relief that was expected was obtained; that is, the symptoms were again reduced to a mere palpitation and brouissement, and a state of tolerable comfort was procured, upon the condition of the most perfect quiet. After the lapse of a month the poor girl left the hospital, believing herself much better; but her heart, by its inordinate action, accompanied by a loud brouissement, still gave unquestionable evidence of its incurable disease.

It has been said that diseases, which pervade several or all the structures of the heart, have their origin frequently either in the pericardium or in the internal lining; and it was proposed to follow them from structure to structure, according to the discoverable traces of their natural order. With this view, beginning with the pericardium, we have already described clinically certain conditions of disease which primarily belong to it. It remains that we take up the subject where it was left, and pursue the history of pericarditis to its consequences in those cases where the patients survive, but the cure is not perfect.

Such a history opens a most interesting and extensive field of practical and pathological inquiry; but I can only enter into so much of it as will serve to fulfil the present purpose I have in view, namely, to illustrate the natural course of diseases of the heart which have their origin in the pericardium.

In acute pericarditis there is no medium between complete cure and certain death; and the cure may be incomplete in two ways. The inflammatory action may be abated but not annulled; or the inflammatory action may be annulled, but the organ may not be restored to its healthy condition.

Now it makes a vast difference in our calculation of results in which sense the incompleteness of the cure be predicated. If the cure be incomplete, because the morbid action, although greatly reduced, does in some degree

still exist, the period of dissolution is only a little postponed; for death will result from the actual disease then in progress, from the injury derived to the functions of the heart from the then existing inflammation.

If the incompleteness of the cure of pericarditis be taken in the other sense, namely, that the morbid action has absolutely ceased, but that an injury is done to the heart which is irreparable, death will still be the inevitable consequence; but it will arrive by different gradations, and after a much longer period. It will result, not directly from the inflammation, but indirectly from the condition of permanent injury in which the heart is left after the inflammation has ceased. From this condition a new series of actions, partly vital and partly mechanical, will arise; and will operate their own changes upon its structure and functions, and upon the structure and functions of other organs, which must terminate in death.

Under these circumstances existence is capable of being greatly protracted; for when the inflammation has ceased this new series of actions has yet to begin; and having begun, it is only gradually and tardily that it can bring about that amount and variety of suffering which is incompatible with the continuance of life.

Before we come to the real pathological conditions of which the diseases springing from this source are constituted, we must first run over their clinical history.

The course and character and duration of the symptoms, will vary considerably in different cases.

It is by no means uncommon, in cases where the cure is complete, by reason of adhesion remaining after the subsidence of the inflammation, for the patient to believe and profess himself well during a considerable period. This happens especially to people who are habitually inattentive to their own sensations, to children, and to those whose situations in life do not call for active exertion. These people, however, if they accurately compared the condition of their bodily health, after the attack of pericarditis, with what it was before, would find that there was something which they could do or sustain then, which they cannot do or sustain now; and that this failure of their powers is respective to the functions of the heart.

The girl, already referred to, who presented herself at St. Bartholomew's Hospital, with palpitation and pain at the region of the heart, and a hurried breathing, and who six months before had suffered acute rheumatism, with severe pericarditis, and was perfectly cured, (as it was supposed,) without the use of mercury; this girl at first told us that after her return home she had no ailment whatever. Being further questioned, she said, "to be sure I could never go up stairs without losing my breath and making my heart beat, but there was no harm in that." An aggravation of the symptoms arose with a fresh attack of acute rheumatism, when the nature of the disease affecting the heart was unquestionably ascer-

tained. There are several children and young people who come occasionally to St. Bartholomew's hospital, at my request, to give me the opportunity of watching the progress of their complaints. They have all palpitation of the heart, accompanied by a loud brouissement. These symptoms, with others bespeaking inflammation of the pericardium, first arose during an attack of acute rheumatism. The rest subsided; these remained; and are now the only symptoms to denote that the heart has undergone a perfect reparation.

It well deserves to be mentioned, as a circumstance of some weight in determining the existence and character of the disease, and also as a part of its history, that, if the heart has been left in a state of incomplete reparation after an inflammation of the pericardium which had its origin in an attack of acute rheumatism, whenever such an attack recurs, there will always arise together with it, an aggravation of the habitual palpitation, and a louder brouissement, and, moreover, pain in the situation of the heart. But what is it that takes place under these circumstances? Is the pericardium inflamed afresh? I believe that it is; for parts, when they are disorganized, and especially when they are so disorganized that newly-formed structures enter largely into their composition, are very susceptible of inflammation. The pericardium, with its adventitious covering of lymph, is just in the condition most ready to accept inflammation under circumstances favourable to producing it; and none can be conceived more favourable than those which gave occasion to its original disease.

If this really be inflammation, it might be thought that every fresh attack would be more and more full of hazard to the life of the patient; and if it did not kill him, that it must necessarily leave him in a much worse condition than that in which it found him. But, strange to say, experience allows us to regard such cases with no great apprehension. I have known many die in a first attack of rheumatic pericarditis, but none in any subsequent one. And further, the instances have been very numerous in which, after several attacks of rheumatic pericarditis, I have seen the patient left in no worse a condition, in respect of the symptoms referrible to the heart, than that in which he was after the first attack.

To escape with life from a renewed attack of pericarditis, where the organ is already diseased, and not only to escape with life, but without aggravation of the symptoms which permanently belong to the heart, are possible and frequent events, yet they can only be ensured by discreet medical management. In such cases it is of great importance neither to do too little nor too much. It is true there is a tremendous augmentation of distress immediately upon the accession of this secondary inflammation; but the inflammation is easily made to loose its hold, (if I may so say,) and the distress is soon abated.

Inflammation affecting parts which are pre-

viously disorganized, is calculated to increase the morbid products already formed upon them; and it is not less calculated to do so in the pericardium than in other parts. Under these circumstances, however, it is much less active and vigorous than when it falls upon perfectly healthy structures, and it commonly gives a much earlier notice of its existence; and is brought much more easily under the control of medicine.

As to the kind of medical treatment, I would only remark generally, first, with respect to bleeding, that if you direct this mode of depletion with the view of entirely stilling the violent action of the heart and arteries, you propose a false and impossible indication of practice; false, because this violence of action is in part permanent, and has not to do with the present conditions of disease; impossible, because no quantity of bleeding short of that which will kill the patient, would be adequate to the purpose; secondly, with respect to mercury, that all which can be done is within the reach of other remedies, and therefore it is unnecessary.

We are to restrict our practice to the purpose of removing so much of the disease as is superadded by the present attack, and to abstain from pushing either bleeding or mercury to an extravagant extent, as if we proposed to play a successful after-game for the complete cure of the disease of the heart, which is impossible.

It is remarkable for how long a period individuals, under the conditions of disease in question, may, and generally do, survive; eight or ten years often elapse from the first attack of inflammation which laid the foundation of the fatal disorganization of the heart, and the death of the patient; while, in the meantime, the inflammation is repeatedly renewed in the same organ. And it is still more remarkable for how long a period, and after how many attacks of inflammation, the permanent symptoms of the patient, will continue nearly the same, and be strictly confined to the heart itself, without occasioning any constant derangement in the functions of other organs.

I lately saw a young woman, 19 years of age, who was a perfect picture of health—every function of the body was performed with the most complete regularity, and she was quite comfortable as long as she remained still; but she had a strong pulsation within the chest, accompanied with a loud brouissement, and a sense of uneasiness and weight in the region of the heart, and of noise and throbbing within the head. Exactly in this state she had been during three years. Three years ago she had an attack of rheumatic fever (she said,) in which her chest was inflamed, and it left her with a palpitation of the heart, which had continued ever since. She had suffered severe subsequent attacks of acute rheumatism, in all of which the palpitation had been aggravated, and the symptoms referrible to the chest had been as severe as they were at first; yet still at the end of three years the

main and permanent symptoms were a mere palpitation and brouissement, with certain inconveniences which are no more than the mechanical consequences of an over-forcible action of the heart.

Such inconveniences are, as they were in this instance, generally referrible to the head. They consist of pain, occasional vertiginous sensations, and ringing in the ears; and to the same cause, viz. the mechanical impulse of blood upon the brain, may be ascribed a symptom which I have often known to be attendant upon these cases from first to last—slight spasms of the extremities, or sudden startings in the sleep.

From what has been said may be collected the ordinary course and character of the disease; but there are cases to which such a description is not suitable—cases in which, from the first attack of pericarditis to the day of his death, the condition of the patient is one of continued suffering: he survives—he is able to leave his bed—but he never recovers the aspect of health: his heart, even in a state of perfect quiet, never ceases to contract rapidly, and with a peculiar sound—his breathing is continually hurried, and he sits still as if he was afraid to stir, and like a man ready to faint upon the least exertion; yet this state of misery is capable of being sustained during many months or years.

But in what manner do such cases arrive at their fatal termination? They have (if I may so say) their natural and their accidental termination; that is, their natural termination when death is slowly brought on by a defect or failure gradually passing upon the functions of other organs, or systems of organs, between which and the heart there is a natural relation and dependency; and that is their accidental termination when death takes place suddenly, before other organs have yet suffered any material derangement of their natural functions, and when it is strictly and exclusively owing to the heart, which, upon some sudden emotion, becomes baffled in its action, and flutters, and falters, and stops, never to go on again. Thus the patient dies of syncope.

The sudden and (as I have ventured to call it,) the accidental mode of death—death not merely by syncope, but by syncope occurring at such a time and in such a manner as to cut short existence long before it has reached the point at which the disease is necessarily mortal—is a most rare occurrence under the circumstances of disease which we are now considering. My own experience does not furnish me with a single instance of death by syncope in cases of organic diseases of the heart consequent upon rheumatic pericarditis. That instances, however, may occur, I am ready to admit, from the very nature of such diseases, and that they have occurred, I must believe upon the best authority. Nevertheless, while death by syncope is a possible hazard contingent upon all diseases of the heart, it is one, I am persuaded, which rarely occurs in any, with the exception of angina pectoris. But in angina pectoris, it is more than an accident. Syncope,

or an approach to syncope, is especially characteristic of this disease, from the beginning and throughout its progress, and when the patient at length dies of syncope, it is not by accident, but under an aggravation of its proper and essential symptom.

When death takes place (as it almost always does) as the natural and necessary consequence of a defect or failure in the functions, or of organic changes in the structure of parts between which and the heart there is a vital relation and dependency, these parts give very intelligible evidences of its approach—evidences which are preceded or accompanied by a marked change in the action of the heart, and the arteries themselves.

The heart's action, which has hitherto been heard and felt in its natural situation only, or but little beyond it, is now heard and felt also beneath the sternum, and, perhaps, on the right side of it, as low down as the epigastric region, and nearly as high up as the clavicle, signs which sufficiently attest, whatever other change of structure the heart may have undergone, that its bulk and capacity are greatly increased.

The action of the arteries, the pulse, which hitherto, whatever may have been its frequency or its force, has been almost constantly rhythmical and regular, now begins to manifest frequent flutterings and intermissions.

Irregularity of the pulse is incident to all organic diseases of the heart, but it especially belongs to those in which there is contraction at some of the orifices, and being so produced, it is constantly present.

That class of diseases which we are now considering, are (as will presently appear) commonly independent of contraction of the orifices, and in them, during the greater part of their progress, irregularity of pulse is only an occasional symptom, arising under circumstances of accidental irritation. But, as they approach nearer to their fatal termination, such circumstances become more numerous, and the heart itself more susceptible of their impression, and the irregularity of the pulse more and more frequent.

When the heart's action is thus found to extend far beyond its natural sphere, and frequent irregularities are now perceptible in the pulse, the extremities of the arterial system soon begin to feel and resent the disorder at their source. The capillary blood-vessels, those little wonderful agents of every living function, are forced to yield to the oppression, and admit a separation of fluid into various parts of the body. Hence arise anasarca and dropsy of the cavities, and derangements in the functions of different organs, betokening that the effusion is not confined to serous and cellular textures. The breathing, especially, becomes more and more laborious, with continual expectoration; and it needs, under these circumstances, but a slight attention to ascertain the actual condition of the lungs. At every part of the chest to which you apply your ear, you will perceive the sound which indicates the displacement of fluid by the pas-

sage of air. From the trachea, throughout the bronchi, to their extreme ramifications, the whole secreting surface is doing all that it can do, by the separation of fluid, to lighten the burden of blood which oppresses the lungs.

Now, there are many phenomena in the circle of consequences resulting from diseases of the heart, which are not always essentially morbid. Dropsical effusions in remote parts of the body, or large secretion from the air-passages, often produce great relief to the chest. Their beneficial effect is, doubtless, occasioned by diminishing the general mass of circulating blood, and herein is surely contained a rational indication of treatment; for if you employ artificial methods capable of compassing the same end, nature may for a time be spared the trouble of instituting these methods of her own, or for a time will cease to do so, and the patient will be equally benefited. In diseases of the heart, there is good reason for believing that the dropsical symptoms are often postponed by small blood-lettings seasonably employed; and I am certain that no class of internal remedies procure such evident relief as diuretics, even although there are no dropsical symptoms yet present which call for their administration. When they *are* present, the same means often succeed in removing them again and again.

The class of organic diseases of the heart derived originally from inflammation of the pericardium, is, more than any of the same organ bearing a different history, capable of having their effects palliated by medical treatment, and for a longer period, and under circumstances of greater extremity. In the deplorable condition which has just been described, when the heart has been felt pulsating far beyond its natural sphere—when the dropsical effusions have been extensive, and motion and the recumbent posture have been entirely precluded, I have seen instances of that degree of relief which has enabled patients to walk about, and to return to their ordinary occupations. Even in the same individuals I have seen the same relief obtained more than once in the like extremity.

Good reasons, I believe, may be given for this postponement of the evil day in the class of diseases under consideration, and I will endeavour to explain them hereafter.

But it is a hard necessity, by which medical men are compelled to adopt the most painful expedients, to bleed, and to blister, and to apply every species of irritant to the surface more and more frequently as the disease advances: for they all eventually fail.

And it is a hard necessity, by which nature herself is compelled to force every part of the capillary system into new and extraordinary action, for the purpose of relieving the urgency of disease at the centre. For thus, by the magnitude of her own efforts for relief, she eventually operates her own destruction. At length neither the powers of nature, nor the resources of art, can longer avail, and the patient must die.

He may die overwhelmed by the excess of dropsical accumulations. But this is not a common mode of death in the class of organic diseases of the heart which we are now considering. I have seen numerous instances where, at the time of death, there has been very little fluid, either in the cellular structure or in the cavities of the body; and I have seen some where there has been none at all.

Or, he may die in consequence of disease and disorganization extending to other vital parts besides the heart. This is, according to my experience, the most frequent and immediate cause of death; and the part which most frequently undergoes this disease and disorganization is the lungs. The perpetual activity of the capillary system to relieve the lungs from their oppression terminates by inflaming them, and thus large portions become solidified, and incapable of the transmission of air.

I have seen instances of death by convulsions and palsy, when serous or bloody extravasations have been found within the cranium.

This is a brief clinical history of one important class of organic diseases of the heart; those, namely, which have been presumed to have their origin in the pericardium. Let us now proceed to consider the real morbid conditions found upon dissection, with the view of fixing more accurately their origin in the pericardium, and their subsequent progress in other structures of the heart. In cases where the clinical history has been such as we have set forth, the following morbid appearances have been found upon dissection after death.

The folds of the pericardium have been always united by coagulable lymph. Sometimes there has been simple adhesion of the pericardium, and nothing more.

Sometimes there has been adhesion of the pericardium, with softening of the muscular substance of the heart, which has lost its characteristic redness, and assumed the colour of a leaf when it is beginning to fade.

Sometimes there has been adhesion of the pericardium, with softening, and also attenuation of the muscular substance.

Sometimes there has been adhesion of the pericardium, with thickening of the muscular substance, which has retained its characteristic redness.

Sometimes there has been adhesion of the pericardium, with dilatation of some or all the cavities of the heart, and that dilatation has been either with attenuation or thickening of the muscular substance.

And sometimes there has been adhesion of the pericardium, with general opacity or partial thickening of the internal lining, or with deposition of lymph upon it, or the growth of minute excrescences, like warts, from its surface, and with or without disease of the muscular substance.

Such is the number and variety of morbid changes connected with a certain class of symptoms, appertaining to the heart. Many

of them appear, at first sight, essentially different from, and opposed to each other.

Where, upon dissection, a disease is found to involve more than one part of an organ, it is not possible to determine, by simple inspection, in which part it had its origin, and in what way it was communicated from one part to another. In short, by simple inspection merely, although it be a thousand times repeated, you can obtain no certain knowledge about the matter. The objects of morbid anatomy are *alone* totally inadequate to explain themselves. It has often been remarked (and most truly) how much light is derived from morbid anatomy towards the explanation of symptoms; but it has been less frequently noticed how much light is derived from symptoms towards the explanation of morbid structures. In fact, the illustration is reciprocal; as, on the one hand, no knowledge whatever would be possessed of half the diseases which we see and treat in the living body, but for the changes of structure found upon dissection after death; so, on the other hand, no knowledge whatever would be possessed of half those changes of structure after death, but for the symptoms which have occurred during life. It is true that no man can be a physician, in any large sense, unless he be a morbid anatomist; but it is equally true that no man can be a morbid anatomist unless he be a physician.

The disease under consideration is an example which strongly confirms the truth of these observations. Much of what has been said concerning its clinical history still waits to be explained by the appearances on dissection; and the appearances on dissection will require to be elucidated by a reference back to its clinical history.

In the summary which has been given of morbid appearances upon dissection, there is one particularly distinguished from the rest. Whether death take place soon after the accession of the disease, or after its continuance for months or for years, adhesion of the pericardium is most certainly and constantly found; and it is sometimes, though rarely, found alone.

The same cannot be said concerning any other of the morbid appearances which have been specified—not one of them can be mentioned as constantly present—not one of them was ever found alone—not one of them was ever found unaccompanied by adhesion of the pericardium.

If, then, there be any part of the disease which is essential and inseparable, it must be inflammation and adhesion of the pericardium,—if there be any which is primary with respect to the rest, and out of which the rest may possibly arise, it must be inflammation and adhesion of the pericardium. The mere inspection of the dead body would lead one to suspect as much,—the inspection of the dead and the observation of the living body together, leave no doubt that it is so.

Where simple adhesion of the pericardium has been found, and nothing more, it has been

in those cases where the patient has died within a few weeks after the accession of the disease, the inflammation having been in full activity up to the period of dissolution.

In some few instances adhesion of the pericardium, and nothing more, has been found after the lapse of two or three months from the accession of the disease, the inflammation in like manner continuing active to the last. Under these circumstances, the coagulable lymph upon the pericardium has been in quantity proportionate to the duration of the disease.

There are two cases given by Andral exemplifying these morbid conditions. The patients were two young men, between 20 and 30 years of age, who both died dropsical in a few months after the first accession of pericarditis: there was nothing further remarkable in the symptoms as they respected the heart and arteries, than that in one case the pulse intermitted, and in the other it was of an extreme frequency. One was a case of acute pericarditis, in which the cure was interrupted by the patient leaving the hospital under a false notion that he was well; the other was of a more chronic kind from the beginning.

Upon dissection, the pericardium was found adherent in both cases; and in both cases the lymph formed upon the pericardium was more than an inch in thickness; and in both the heart itself was of its natural size, and perfectly free from disease.

Here we see, that as long as the inflammation continues, lymph, which is its essential product, will still be deposited, until, by its accumulation between the folds of the pericardium, it may so oppress the heart as to occasion death, independent of disease in any other part of its structure.

Further, adhesion of the pericardium, united with a general softening of the muscular substance of the heart and a fading of its colour, while its natural bulk and capacity are yet unchanged, seems to belong to cases of recent disease, where the patients have died during the actual progress of the inflammatory action. Paleness and softening of the muscular substance have been enumerated among the characteristic marks of its inflammation.

As an example of rheumatic pericarditis proceeding unchecked to its fatal termination, I have already given the case of a boy who died in three weeks from the first accession of his disease. In him, besides the adhesion of the pericardium, and the accumulation of lymph, half an inch thick between its folds, "the muscular substance of the heart was of a pale yellow colour, and soft of texture."

In this case we have cognizance of the inflammation just after it has been imparted from one structure to the other. The pericardium is inflamed, and the muscular substance is inflamed—this is all: the organ still retains its natural bulk and capacity, and it is probably the actual force of the existing inflammation which kills, and not the extent of

the injury. It is true the injury, as far as it has gone, is irreparable,—the adhesion of the pericardium can never be resolved, and the muscular substance can never recover its firmness of texture. Nevertheless, could the inflammation be made to cease, the patient would survive in spite of the injury hitherto sustained; in fact the inflammation, after it has gone thus far, often *is* made to cease, and the patient often *does* survive. But by his surviving he admits no further chance of reparation to the injury already done, but only allows time for the heart to undergo those further changes of structure which are the natural and necessary consequences of an adhesion of its pericardium, and a softening of its muscular substance.

Now, if the inflammation cease and the patient survive, the ultimate change of structure resulting to the heart will be different, according as the original inflammation has or has not been restricted to the pericardium; and according as the original injury has consisted simply of an adherent pericardium, or an adherent pericardium, together with a softening of the muscular structure.

When the inflammation has been solely and exclusively of the pericardium, and has never proceeded beyond it; and when it has been entirely arrested, but not until it has produced a permanent and extensive adhesion, that adhesion (every other part of the organ being yet free from disease) will, in process of time, produce such a change of its entire structure, as will be incompatible with the continuance of life. The change of structure will consist in an augmentation of its strength and bulk, and a dilatation of its cavities. The increase of strength and bulk may appertain to the muscular substance of the heart generally, but it is found most frequently in the walls of the left ventricle only; and the dilatation may belong to all the cavities equally, but it is found most frequently and conspicuously in the right auricle and ventricle.

But how does such a change of structure result to the heart from a mere adhesion of its investing membrane? The explanation (as far as it is capable of being explained) was long ago afforded by Hervey himself, when he pointed out that the heart was obedient to the laws of muscular action, and that it, like other muscles, was apt to gain an increase of strength and bulk in consequence of its own more frequent and energetic contractions; and that, consequently, every stimulus which was capable of calling forth such more frequent and energetic contractions, becomes the cause of the changes of structure resulting from them. In this manner the adherent pericardium may become the cause of thickening and unnatural bulk to the muscular parietes of the heart.

But when the inflammation originating in the pericardium has reached the muscular substance, and has been made to cease in both, but not until it has produced an adhesion between the folds of the one, and a softening in the texture of the other, the change of struc-

ture ultimately produced will bear a remarkable contrast to that which has just been described.

The whole organ will be increased in size and its cavities dilated, and altogether at the expense of its muscular substance, which will be in every part thin and attenuated—so thin and attenuated, that in some cases it has lost its characteristic organization, and the heart has had the appearance of a mere fibrous bag.

This peculiar change of structure it is surely not difficult to explain; it is necessarily consequential to the condition in which the muscular substance was left by the inflammation originally imparted to it from the pericardium. Having lost its resistant and contractile power, it naturally yields to the pressure of blood constantly distending it from within.

While the heart is undergoing these changes, whether of augmentation or diminution, in the strength and bulk of its muscular substance, there are changes moreover taking place in the adherent pericardium. After the lapse of many months or years, there does not appear the same thick accumulation of lymph which is found when death takes place during the actual progress of the inflammation: all the loose pulpy portion is absorbed, and only so much remains as may be deemed enough to serve as a medium of adhesion. Yet on this account the adhesion itself is not less firm, but infinitely more so. I have seen, in such cases, the union of the heart and its investing membrane so firm, and close, and intimate, and the two so absolutely inseparable, that there has been no visible distinction between them—they have seemed to be one, not merely by intimacy of connexion, but by identity of structure.

To any one conversant with the processes of disease, it must be obvious that the heart can only arrive gradually and tardily at these conditions of disorganization: and the observation of symptoms, taken together with morbid dissection, sufficiently confirms this belief.

It will be recollected that two pathological conditions have been described, which are essentially different from each other: in the one there is an augmentation of strength and bulk in the walls of the heart, with dilatation of its cavities. This condition is answerable to the idea of what is called active dilatation. In the other there is attenuation and wasting in the walls of the heart, with dilatation of its cavities; a condition answerable to the idea of what is called passive dilatation. The first has been said to result simply from the irritation of an adherent pericardium, stimulating the organ into frequent and excessive contractions; the second from actual disease, originally communicated from the pericardium to the muscular substance of the heart.

Now, from cases which have come to my knowledge, I am not certain that these species of disorganization are not capable of being distinguished, the one from the other, by symptoms during the life of the patient.

In describing pericarditis by its symptoms,

an order of cases was mentioned in which the patient survived, and not only survived, but recovered many of the general conditions of health; and further, in which he often suffered renewed attacks of inflammation and again recovered; bearing, however, to an experienced eye, from first to last, the marks of incurable disease, and inevitably perishing after the lapse of years. In these cases, I have little doubt that the original inflammation is restricted to the pericardium; and that, after its subsidence, the remaining injury consists simply in an adhesion of its folds, out of which, as a work of time and of continual irritation, the disorganization of the heart constituting active dilatation, arises.

Again, in describing pericarditis by its symptoms, another order of cases was noticed, in which the patient survived, but never recovered the aspect or general conditions of health; in which the circulation always remained disturbed, and the breathing hurried; and from first to last there was no respite from distress. In these, I cannot help believing that the inflammation beginning in the pericardium is soon imparted to the proper substance of the heart; and that, after its subsidence, the remaining injury consists in a complete softening of the muscular structure, as well as in an adhesion of the investing membrane.

It is proper to remark, that in cases which bear this clinical history, and which are characterized by the symptoms, and arrive at their fatal terminations after any of the manners specified, while we may expect to find an active or passive dilatation of the heart united with an adherent pericardium, we must not expect to find either the one or the other always of any definite degree or amount. Death is not necessarily postponed until the heart has attained an extreme point, or indeed any certain point, of disorganization in each kind respectively. In no respect do the constitutions of individuals exhibit a more striking difference than in the various capacity possessed by the vascular system of sustaining the injurious impressions which are made upon it. The common stimulants in daily use, which, operating through the medium of the heart and arteries, provoke disease and disorganization in some, and rapidly cut short existence, are borne with impunity by others, who reach old age in spite of them, or (as they would say) by their very help and sustentation. And if this difference be seen, where the cause consists in reiterated applications of injury from without, it is not less apparent where it is physically inherent, and essentially abiding, and constantly operating within the heart itself. Death, indeed, is the uniform result; but whether it take place by nervous exhaustion, or by general dropsy, or by effusion or hemorrhage into the interstitial structure of vital organs, it arrives not only after different periods of time, but at different gradations in the progress of the disease itself. Where there is a permanent adhesion of the pericardium, life will, in some cases, last long enough, and the vascular system will be sufficiently

patient of the irritation at its source to allow the heart to acquire an addition of one-third, or even one-half to the natural thickness of its walls; while, in other cases, it will yield to the irritation, and death take place when the disease is less advanced; and, upon dissection, there will be a doubt whether the heart has really acquired any augmentation of its natural bulk and thickness. Again, in some cases, where there is a permanent adhesion of the pericardium, the heart will be found reduced to the appearance of a mere fibrous bag, from extreme attenuation, while, in others, its muscular substance will be softened, indeed, and pale, but its attenuation will be hardly begun.

Concerning the extreme degrees either of active or passive dilatations, therefore, as consequences of an inflamed and adherent pericardium, the heart may rather be said naturally to tend towards them than necessarily to reach them in all cases.

Something remains to be said concerning the condition of the internal lining in the cases where injury results to the general structure of the heart from inflammation and adhesion of the pericardium.

Strictly speaking, wherever the cavities of the heart are enlarged there must be some change in the condition of the internal lining; for it must follow the expansion of the muscular substance upon which it is spread and to which it adheres. But this change of condition is such as its own elastic properties enable it to undergo without injury to its structure.

But, besides this, certain morbid conditions have been found in the internal lining. These have consisted sometimes in the deposition of lymph upon it; sometimes in its general opacity, or partial thickening; and sometimes in the growth from its surface of minute excrescences resembling warts.

With respect to the deposition of lymph, I have never heard of it except in one case, which occurred to my friend, Dr. Farre. It was a case of most acute inflammation of all the organs within the chest, and involving the heart. Here the deposition of lymph upon the internal lining must be regarded as the evidence of acute inflammation, attacking it simultaneously with the pericardium; the inflammation, however, having no necessary connexion in one or the other.

With respect to the general opacity, or partial thickening of the internal lining, I have met with it in almost all cases of those disorganizations of the heart resulting from pericarditis which have been the growth of years. It is the evidence, no doubt, of chronic inflammation—of inflammation, however, not directly imparted to the internal lining from other structures, but the result, probably, of that disturbance which the *proper* vascular system of the heart has sustained in the progress of its disorganization.

With respect to the growth of excrescences resembling warts from the internal lining, they are by no means constantly found. Indeed they are much more frequently absent than

present; and when they are found, they occur in no particular situation, being as often met with on one side of the heart as on the other, in the auricles as in the ventricles, and as often on any other parts of the membrane as on those which form the valves. I have never seen them sufficiently large to be thought capable of furnishing a mechanical impediment to the passage of blood. I hardly know how to regard them. Although they are found coincident with an inflamed and adherent pericardium, the connexion between the two is not obvious. I have met with them both in those who have died soon after the first attack of pericarditis, destroyed by the force of the existing inflammation, and in those who have died at remoter periods, in consequence of the ultimate injury resulting to the heart and to other organs: and, under all circumstances, their anatomical character has been the same. I suspect that they are the products of recent inflammation in the internal lining—inflammation which has arisen a short time before the patient's death.

Such are the morbid changes (as far as I am acquainted with them) which result to the general structure of the heart, from inflammation and adhesion of the pericardium, or are in some manner combined with it; and such (as far as I have been able to inform myself) is the order of their progress and the rationale of their production. There is, however, much concerning them, both in respect to their essential nature and of their clinical history, which will be better understood when we come to the investigation of diseases of the heart having a different origin. There are many phenomena in nature which become more intelligible by comparison and contrast with other things than by themselves alone; and this is especially the case with the phenomena of health and of disease.

Our next subject of investigation will be the diseases of the internal lining of the heart, and the changes which thence result to the structure of the whole organ; and among these changes, some will be found identical with those which have been already described as proceeding from disease of the pericardium. In fact, active and passive dilatation are consequences which are capable of proceeding as well from disease of the internal lining as from inflammation and adhesion of the pericardium. But these same organic changes, deriving themselves from different origins, while they have many symptoms in common, will be found to differ in several very material circumstances of their clinical history.

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From the Archives Generales de Medecine.

NOTE SUR UNE ESPECE RARE DE  
DYSPHAGIE. Par le docteur OLLIVIER,  
(d'Angers.)

Sauvages has described in his nosology a species of dysphagy, to which he has given the appellation of *Valsalviene*, from its hav-

ing been first observed and described by Valsalva, in his treatise *De Aure Humanâ*, and by him attributed to a luxation of the cartilaginous appendices of the os hyoides. Molinelli subsequently related two examples, in which the exciting cause was not, as in the case of Valsalva, the swallowing of a hard and voluminous body, but violent pressure upon the fore part of the neck.

From the above citations, which, so far as I know, are the only instances of the disease on record, an idea may be formed of the infrequency of its occurrence; the following case therefore, is the more interesting, that it was twice observed in the same individual. Dr. Mugna has thought proper to publish it, not on account of the infrequency of the disease, but because by some authors its reality is denied; it is possible also, that this species of dysphagy is less rare than is generally supposed, and that, in some instances, it may have been confounded with the symptoms which ordinarily result from the presence of a foreign body arrested in the œsophagus, and those which sometimes manifest themselves when a hard and voluminous substance has been swallowed.

A man, about sixty years of age, of a weak constitution, in swallowing a large piece of meat, suddenly experienced a strong sense of constriction, as if it had been arrested at the entrance of the œsophagus; in a little while, he was tormented by a continual desire of deglutition, accompanied with ineffectual efforts, without the power of swallowing his saliva, or a single drop of liquid. Dr. Mugna on being called in, found the patient already fatigued by his incessant and fruitless efforts of deglutition, and the affection becoming more and more painful. He was continually making the movements preliminary to the act of swallowing, and when he had thus exhausted himself in ineffectual endeavours, a noise was heard analogous to that produced by air escaping from the œsophagus. The anxiety of the patient increased every moment. His respiration and speech however, were perfectly free, and neither in the pharynx nor external part of the neck could any change of form or colour be discovered. A bougie was introduced into the œsophagus, into which it penetrated easily, passing the spot where the patient supposed the piece of meat to be lodged. The most attentive examination could detect no obstruction, and was productive of no relief.

The region pointed out by the patient as the seat of the foreign body, was precisely that occupied by the os hyoides, and Dr. Mugna having convinced himself that there was no extraneous substance there, supposed that the dysphagy might arise from a luxation, or, more properly speaking, a diastasis of the cartilaginous appendices of the os hyoides. In pursuance of this idea, he carried the index and middle finger of the right hand into the throat of the patient, beyond the root of the tongue, so as to act upon the os hyoides, as recommended by the authors who have treated of this affection, while at the same

time, the left hand was applied upon the front of the neck and os hyoides. This simple manœuvre immediately removed the painful sensation under which the patient had been labouring, and directly afterwards, he could swallow without difficulty.

From this period for the space of two years, there was no recurrence of the affection, but at the expiration of that time, while swallowing a large mouthful of cake, the same symptoms suddenly reappeared. Profiting by his previous experience, Dr. Mugna had recourse to the same means and with similar success.\*

Writers who have treated of dysphagy allude to the displacement of the os hyoides, as one of the causes by which it may be occasionally, though very rarely produced. All of them, from Morgagni down, cite, in confirmation of their opinion, the case of Valsalva, without examining how far the explanation given by this author, and which he proposes merely as an hypothesis, is well founded. The instances related by Molinelli and Dr. Mugna, analogous to that of Valsalva, remove all doubt as to the existence of an obstacle to deglutition, caused by a displacement of the solid parts situated in front of the neck, and very probably of the os hyoides upon the cartilages of the larynx; but in what does this displacement consist? This is a point which has not hitherto been examined, writers contenting themselves with repeating after Valsalva, that there was a luxation of the superior cornua of the os hyoides.

These hordeiform appendices are sometimes, it is true, of considerable length; but in what manner are they susceptible of luxation? The possibility of this occurrence it is difficult to conceive; so that whatever the displacement may be, I do not believe in the existence of a luxation, as stated by him, and am equally unable to comprehend the diastasis of Dr. Mugna.

Reflecting upon the circumstances under which this accident has occurred, it seems to me that an explanation may be found more satisfactory at least, if not more correct. In the cases hitherto related, the causes producing this dysphagy have been either a violent effort of deglutition, or a strong pressure exerted upon the front part of the neck; now can we not suppose that in these two circumstances, the os hyoides may have been carried, either laterally and downwards, in such a manner that one of the cornua of this bone may have engaged itself within the corresponding cornu of the thyroid cartilage, and remained fixed in this situation (we know that these apophyses of the thyroid cartilage are sometimes of great length;) or that the inferior cornua of the os hyoides, suddenly approximated to each other, and pressed downwards and backwards, may have become fixed in the space intervening between the two apophyses of the thyroid cartilage, an effect, the possibility of which, when the neck is violently compressed as in attempts to strangle

by means of the hands, may readily be conceived. Although the hypothesis which I propose, appears to me to be founded upon the disposition of the parts, it would be useful to confirm it by experiments upon the dead body. I may add, that the very variable dimensions of the greater and lesser cornua of the os hyoides, as well as of the superior apophyses of the thyroid cartilage, and the ossification of the latter must have considerable influence in the production of this displacement. Independently of excess in length, we may easily imagine that it would be greatly favoured by any irregularity in the direction of these processes.

From the London Medical Gazette.

#### ON EXTIRPATION OF DISEASED OVARIA. By Dr. HOPFER, of Biberbach.

The observations in the *Medicinisch-Chirurgische Zeitung*, for February 1827, on extirpation of diseased ovaria, translated from the English of Lizars, induces me to communicate to the profession the history of three cases in which this operation was performed by the late lamented Dr. Chrysmar, and at which I was present.

Being called, in 1819, to Allgau, as Medical Superintendent in the upper district of Swabia, I there, in the course of my official duties and private practice, became acquainted with Dr. Chrysmar, who enjoyed great reputation in all that country, and in the adjacent parts of Austria and Bavaria, as a distinguished operator and practitioner. Previous to my acquaintance with him, he had twice performed the operation of extirpating a diseased ovarium, and in one of these instances with success. To him, therefore, belongs the merit of being the first to perform this important and dangerous operation. Having repeatedly seen him operate with great dexterity, skill, and intrepidity, I was naturally desirous of witnessing the removal of a diseased ovary; and in the course of three years the opportunity of doing so presented itself twice.

CASE I.—A peasant's wife, in Leupolz, 47 years of age, came to Wangen to consult me, about her strange condition, as she termed it. At first sight I thought her pregnant: but she quickly undeceived me on this head, and gave the following history. At the age of 21 she married, and in her 23d year bore her first child; to which seven others succeeded in the course of 18 years. Until the sixth, her labours were natural, but this required to be completed with the forceps. In her 41st year she was pregnant for the last time; and although her delivery was easy, yet her recovery was not favourable, as she was confined to bed for five weeks, during which she laboured under a good deal of abdominal irritation. From this time, without any decided pain, she experienced a sensation of uneasiness and dragging in the left hypochondrium.

\* *Annali Universali di Medicina.*

The menses ceased in her 44th year; and her abdomen becoming tumid, this, along with some other symptoms, led her to suspect she was pregnant; but twelve months elapsing, and the feeling of weight, and the distention in the left flank increasing, the idea of pregnancy was banished from her mind.

At the commencement of her 46th year, she was, in appearance, as large as a woman at the full period of her pregnancy. The left side of the abdomen felt hard; and on compression, a solid tumour, of irregular surface, and somewhat moveable, was discovered in this situation; fluctuation was also perceived in the abdominal cavity. She became emaciated, lost her appetite and sleep, had attacks of feverishness towards night, and frequent fits of vomiting. Of the country surgeons and irregular practitioners whom she consulted, one said she was dropsical, another tympanitic, and a third that she was hysterical. Finally, she applied to a physician, who, considering the case as one of extra-uterine foetation, and, as such, more properly the province of a surgeon, advised her to consult one. She now applied to me, and having recognised a great enlargement of the left ovary, I proposed that Dr. Chrismar should be consulted. Accordingly we met; and Dr. Chrismar having examined the parts, "*et per vaginam et per anum*" (by which last an irregular tumour, the size of a child's head, was found descending into the pelvis,) declared the case to be one of diseased ovary, complicated with ascites.

The prognosis was very unfavourable; but being informed that an operation presented the only, though a very doubtful means of relief, she determined upon submitting to it; which, at the expressed wish of the patient, Dr. C. undertook to perform. On the 16th May, 1819, with a temperature at six degrees Reaumur, the operation was performed in my presence, and that of three surgeons now living. The external incision extended from the ensiform cartilage, passing on the left side of the umbilicus to the pubes. On puncturing the peritoneum, about three inches above the navel, about a gallon of a yellowish green serum was discharged, and received in a vessel. On carrying the incision downwards, the intestine and omentum protruded; and being carefully enveloped in a towel, wrung out of warm water, were supported by an assistant. In this way the operator was enabled to examine the tumour on every side; and to his surprise found it extensively adherent to the descending and transverse arch of the colon, to the great arch of the stomach, and to the inner surface of the peritoneum. These adhesions were separated, partly by the fingers, partly with the handle of the knife; and the peduncle itself, proceeding from the broad ligament of the uterus, divided, and tied with two ligatures. The quantity of blood lost was inconsiderable; and this proceeded from the branches of the epigastric artery, two of which were secured by ligature.

The operation, from the length of time oc-

cupied in separating the adhesions, lasted rather more than twenty minutes. The patient bore it well, with the exception of some transitory fits of syncope. In dressing the wound, the ends of the ligatures attached to the peduncle were left hanging out at the lower part of it.

Being placed in bed, the patient soon afterwards fell asleep: this lasted scarcely twenty minutes, when it was interrupted by hiccup. The pulse became frequent, with great anxiety and oppression at stomach, followed by repeated vomiting, of a bitter greenish matter, for three hours. An emulsion of nitre and opium produced no abatement of the symptoms. The hiccup increased, with occasional fits of syncope, under which she seemed to be sinking. The extremities became cold, and the pulse frequent and tremulous: small doses of musk and opium relieved the irritability of stomach, occasioned, no doubt, by the separation of the adhesions of the tumour to its greater curvature; but the patient expired 36 hours after the operation.

The diseased ovary weighed seven pounds and a half; its surface was irregular and knotty; its section presented in some places a cartilaginous and fibrous texture, with intermediate excavations, filled with a greenish offensive sanies. In other parts the tumour had a lardaceous consistence and colour; and one of the cavities was remarkable in being filled with a grayish pultaceous mass, having more indurated, almost osseous portions of various sizes interspersed.

On examining the body, a considerable quantity of a thin puriform fluid escaped from the wound, and a larger quantity of this was found in the cavity of the pelvis. The omentum and intestines, the latter of which were adherent in the vicinity of the wound, were discoloured and covered with a layer of coagulable lymph. The peritoneum, where the ovary had been separated, had a sphacelated appearance. On the great curvature of the stomach, and descending part of the colon, there were a number of reddish and gangrenous spots, over which was exuded a layer of coagulable lymph. The peduncle of the extirpated ovary, and the broad ligament of the uterus itself, were healthy. The right ovary was of its natural size.

CASE II.—A. B. 38 years of age, was a healthy young woman, and married at the age of 25, and in the course of seven years bore five children. After her confinement with the last but one of these, she was attacked with inflammatory fever, suppression of the lochia, and symptoms of metritis. Considerable anxiety was felt for her life; but by proper remedial measures she recovered, (apparently completely,) in the course of six weeks. From this time, however, she was seldom entirely free from a sense of dull pain in the hypochondrium, but which she paid little attention to, more especially as the recurrence of the menstrual discharge was attended with relief; and as, on her again becoming pregnant, it almost entirely disappeared. During her

pregnancy, and for a year and a half afterwards, she enjoyed good health; a dull pain in the left side being only felt at the accession of the menstrual periods. About this time, however, she observed that the left side was somewhat larger than the other, and on compressing it firmly a small tumour was felt in the left iliac region. Somewhat uneasy at this, she consulted a physician, who, without entering into any explanation of the nature of her complaint, recommended a visit to some neighbouring sulphureous baths. From a three weeks' employment of these she appeared to derive benefit; the uneasiness in the side ceased; the tumefaction diminished; and the swelling could scarcely be recognised on close examination. She now returned home, but the improvement was of short duration; the menstrual discharge became irregular, not appearing but at intervals of eight or ten weeks; the pains and tumefaction of the side returned, the latter gradually occupying the whole of the abdomen. She lost her appetite and strength; she had frequent attacks of shivering, succeeded by heat; and the general tumefaction of the abdomen and tumour in the left side continued to increase.

In this way two years elapsed without any other means being resorted to but aperients to relieve the bowels. At the end of this time the distention of the belly was very great, with evident fluctuation; the breathing was oppressed, and there was general œdema of the inferior extremities. Professional assistance was resorted to; and under antiphlogistic treatment, combined with the use of mercury, the secretion of urine became augmented; the action of the bowels more regular; the abdomen softer; the swelling in the left side less tense and painful; and she improved likewise in health and spirits. Satisfied with this benefit, she now abandoned the use of medicine, trusting the completion of the cure to nature; but in a short time all the symptoms became aggravated, and the tumour in the left side, with its irregularities, previously only recognizable to the touch, now became visible to the eye.

She now applied to Dr. Chrismar, who, upon a careful examination of the case, informed her that medicine would not avail; adding, that the only possible remedy was by an operation, which he had already executed three times, and once with success; without, however, holding out either to the patient or her friends a promise of success, but rather pointing out its attendant dangers. Undetermined, she returned home, but in a few days wrote to say that she had made up her mind to have the operation performed, and would shortly come to Isny to have it done. Accordingly, in June 1820, it was undertaken, in the presence of Dr. Bannwarth and three neighbouring surgeons. The temperature was between fifteen and eighteen degrees Reaumur.

The patient being placed on a low but firm table, covered with a mattress, and her head properly supported, Dr. Chrismar made an

incision in the course of the linea alba, commencing a little below the ensiform cartilage, and terminating at the pubes. This divided the skin and cellular substance down to the muscles, and another between the recti exposed the peritoneum, which was opened with great caution a little above the navel. The fore-finger of the left hand being introduced into this, the wound was enlarged upwards and downwards, to the extent of that in the integuments. Whilst this was effecting, the intestines protruded, and attempts were at first made to restrain them by the hands of an assistant dipped in oil, or at least until the enlargement of the aperture of the peritoneum was completed, when they protruded so completely that it became necessary to envelop them in a wet warm napkin. Their motions, and the violent pulsations of the abdominal aorta, filled the assisting surgeons with fear and pity; but the undaunted operator proceeded to examine the tumour, which exceeded in size that of a child's head, and was only adherent posteriorly to the pelvis. Being held up by an assistant, Dr. C. carefully separated its adhesions to the peritoneum and entrance of the pelvis, and a double ligature being then thrown round its attachment to the broad ligament, it was completely detached and removed. There was no adhesion to the uterus, which, as well as the right ovary, appeared healthy.

The intestines, which, during this period (about five or six minutes,) had been kept carefully covered up, were now returned into the abdomen; the wound carefully united by ligatures—those upon the root of the swelling hanging out at the lower part of it. The operation lasted about a quarter of an hour, and was borne with great firmness by the patient, who was immediately afterwards placed in bed, covered with a light covering, and two table-spoonsful of an emulsion with nitre given every two hours. As a slight shivering, with hiccup, came on some hours afterwards, five or six drops of laudanum were given at intervals. The diet consisted of barley water, and *eau sucrée* for drink. She had a tolerably good night, and had three hours' sleep towards morning. The pulse was soft, (at midnight it was 100,) the skin moist, and the urine not high coloured. In this way three or four days passed over, and with the exception of a slight degree of fever, without any great disturbance of the system. As the hiccup abated, the laudanum was omitted, evacuations from the bowels were procured by means of emollient clysters, and the wound was not dressed until the sixth day. Healthy suppuration took place; the ligatures separated in due time; granulations formed, and the wound healed so quickly, that the patient went home quite well at the end of six weeks.

The tumour weighed eight pounds, had a knotted appearance, and bluish colour, and its section presented a fibrous texture, with cavities containing some matter like honey, others a greenish sour-smelling fluid.

It is to be remarked that this patient subsequently became again pregnant.

CASE III.—The subject of this was a single woman, of Scheidech, in Bavaria, 38 years of age, of feeble constitution, small stature, with a hump back and deformed pelvis, which were attributed to rickets in childhood. At the period of puberty she laboured under chlorosis for a year and a half, but at the age of 18 the menses appeared, and continued regular for more than two years. In her twenty-first year she had a nervous fever, and from this time her health became impaired. The menstrual discharge became irregular, the functions of the liver disordered, accompanied with some fulness in the region of that organ, and pain on pressure. The remedial means which were resorted to procured some relief; but in the course of time, in addition, the abdomen generally became swollen, with œdema of the lower extremities: various diuretics were resorted to, but with partial benefit. In her thirty-second year a large irregular tumour, the size of a child's head, was discovered in the left iliac region, which yielded to the pressure of the hand, seemed to float in the surrounding fluid (the patient labouring under ascites.) She was now tapped, and two gallons of fluid, of gelatinous consistence and yellowish colour, evacuated with partial and temporary relief.

In 1820, the patient applied to me. On examination of the distended abdomen, I readily distinguished an enlargement of the right lobe of the liver, with fluid collected in the cavity of the peritoneum. The uneven hard tumour in the left side, which was moveable above and behind, but not at its lower part, and about the size of the head of a child of four or five years old, appeared to me a diseased condition of the left ovary, and I therefore advised her to go to Isny, and consult with Dr. Chrismar.

In a fortnight afterwards, Dr. C. wrote me that he had carefully examined this patient, and ascertained that the tumour was a diseased ovary. The operation, he considered, as affording the only chance of cure, but in a subject like this, diseased and deformed from infancy, the issue must be most uncertain; and he added, that if the patient made up her mind to have it done, he would only perform it with the sanction of the Bavarian district physician, Dr. W. of Weiler, and my assistance. We counselled the patient to deliberate carefully, to consult several practitioners on the subject, and if she resolved upon submitting to it, to fix the time herself for its performance.

In three weeks I received a letter from the clergyman of the place, informing me that the patient had determined upon having the operation performed, naming also a day in August for it. It was accordingly executed by Dr. Chrismar, in the presence of Dr. W., myself, and three assistants, the temperature of the apartment being 18 Reaumur.

The external incisions were made in the manner already described. On cutting through

the peritoneum about three quarts of fluid, of a greenish yellow colour and nauseous smell, were evacuated. An assistant kept the protruding intestines aside with a napkin dipped in warm water, in order to afford room to the operator to get at the diseased ovary. This had a bluish appearance, and was covered with varicose vessels. Its only adhesions were towards the projection of the sacrum, and these were divided with the scalpel. The division of the four-inch thick pedicle was affected after the application of a double ligature to it. The wound being carefully closed and dressed, the patient, who was greatly exhausted, was put to bed. Soon afterwards she fell into a state of syncope, which lasted for eight minutes, and this continued to recur at intervals for thirty-six hours, when death, preceded by convulsions, closed the scene.

On examination of the body the larger and small intestines, with the omentum, were found greatly inflamed, and the peritoneum, towards the promontory of the sacrum, was covered with a coating of lymph. A quantity of offensive fluid was found in the pelvis. On the lower part of the colon were several gangrenous spots. The uterus was of the natural size. The right ovary was twice as large as natural. The mesenteric glands were enlarged and indurated. The right lobe of the liver was crowded with tubercles. The extirpated tumour weighed six pounds and a half, and on being divided, presented a lardaceous texture, with numerous fibrous cysts filled with a brownish stuff, like size. Probably the long duration of the disease, with the morbid state of the liver, and the debilitated condition of the patient, contributed to the rapidly unfavourable issue of the operation in this case, which in other respects was not attended with any extraordinary occurrences.—*Graefe and Walther's Journal.*

From the London Medical and Physical Journal.

#### COLICA PICTONUM.

*On the Treatment of Colica Pictonum by Alum, under the direction of M. KAPELER, Physician in chief of l'Hôpital Saint Antoine. By M. D. MONTANCEIX.*

For the last thirteen years, M. Kapeler has treated colica pictonum with alum, with a very favourable result. From fifteen to twenty persons affected with this disease are annually received into the hospital. The practice adopted at La Charité, which consists of drastic purgatives, sudorifics, and narcotics combined, is that which is usually had recourse to in France. As a proof of the efficacy of M. K.'s treatment, the following interesting cases are related.

CASE I.—L. Bouigny, of a good constitution, aged nineteen years, a house painter by trade, was admitted on the 20th of February. The symptoms were as follow: For the last eight days he had been obstinately constipated, notwithstanding several clysters had been

given. Great pain in the abdomen, which was rather relieved by pressure. Gnawing sensation of the stomach. Tongue dry and white; mouth bitter; urin scanty. Pulse forty in a minute; no headach. He has had no sleep for the last four days.

On the day of his admission, he took a mucilaginous mixture, with a drachm of the sulphate of alum, a table-spoonful each hour. An emollient clyster was administered. Barley and linseed water for common drink; spare diet.

21st.—Pulse quicker; tongue not so dry; less bitterness of the mouth; pains diminished; two hours' sleep. He has had two motions in the night, and has made water three times.

The same remedies continued.

22d.—Continues better.

In the evening, all the abdominal symptoms had ceased, and the pulse was nearly natural.

To take half a drachm of the sulphate of alum in the mixture as before. Broth diet.

25th.—Perfectly free from all symptoms of the disease.

26th.—Complains of pain in the head, with symptoms of general excitement. He was bled, and a blister was applied to the neck; and soon after he left the hospital.

CASE II.—C. Baudin, an earthenware potter, of a weak constitution and lymphatic temperament, aged thirty-one years, was attacked, on the 26th February, with very acute pains in the belly, which obliged him to roll upon the ground. He uttered the most piercing cries, and was thrown into various positions. His suffering was somewhat relieved by applying a tight bandage round the belly. He was sleepless, complained of headach, and had been constipated for two days. He had a creeping sensation over all his limbs.

27th.—He was admitted in the following state: Extreme depression, trembling, and convulsive movements of the upper limbs; cramps in the lower limbs. The eyes were particularly brilliant. Acute pains in the abdomen, which were relieved by pressure, although the patient was averse to it. Retraction of the belly. Tongue dry, and of a blackish colour. Urine of a small quantity, and red; bowels constipated. Pulse small, and thirty-five in a minute. He was delirious two hours after his admission, and the strait-waistcoat was required.

Ordered to have barley and linseed water for common drink. Mucilaginous mixture, with a drachm of the sulphate of alum. An emollient clyster was given. Strict diet.

28th.—In the same state. Delirium has been very violent during the night.

Sulphate of alum two drachms. An oily clyster every half hour.

In the afternoon, the patient had recovered his senses, and complained only of a slight pain in the epigastric region and in the head. His bowels had been freely open, and he had made a large quantity of water.

Sulphate of alum one drachm. Same diet.

He now became convalescent, and in eighteen days was discharged well.

CASE III.—J. Maiseau, of a strong constitution and bilious temperament, forty years old, a cooper by trade, was admitted on the 27th February, in a state resembling intoxication. He was violently delirious; his look was wild, and he was apprehensive that some injury would be inflicted upon him. He was furious when his belly was pressed, but still the pain which he complained of appeared to be relieved. Pulse very slow.

The case was at first doubtful, but it was soon ascertained that he had several times been attacked with metallic colic, and had once been in La Charité for three months with this disease. He was ordered a drachm of the sulphate of alum and a purgative clyster. In three hours he was much calmer, and he had a tranquil night. No evacuation from the bowels.

28th.—Patient calmer, but still he had not regained his mental faculties. Pulse very slow; abdomen painful; continual shaking of the head; tongue dry and rough.

To take two drachms of the sulphate of alum.\* Purgative clyster every hour. Linseed tea for drink.

In the evening, the patient had recovered his senses, but had no recollection of what had passed. Still pains in the belly. He is now amaurotic, and has entirely lost his sight. Trembling in all the limbs. Bowels have not been opened.

Sulphate of alum two drachms. Two purgative enemas.

29th.—Pain has ceased; no trembling; return of appetite. Continues amaurotic. Has had four motions in the night.

Repeat the same remedies.

March 1st.—No alteration.

2d.—Begins to distinguish objects.

Medicines continued. Allowed soup.

15—Sight entirely recovered.

From the 3d to the 12th, he has taken each day a drachm of the sulphate of alum. Several boils have appeared in various parts. He was discharged cured, after having been fifty-three days in the hospital.

CASE IV.—J. Legrand, of an ordinary constitution and bilious temperament, forty-two years old, a lapidary by trade, has been treated fourteen times in the space of twenty years for colica pictonum. The first attack occurred when he was about twenty-one, six months after he commenced his business. He had always been admitted into La Charité. When he was first seen, on the 29th February, he said that, eleven days before, he was suddenly seized with general uneasiness and headach, which lasted four days. On the 25th, he had cramps in the lower extremities, and pains in the belly, which were at intervals very severe. He does not complain on pressure. Loss of appetite: nausea, vomiting. Convulsive movements of the arms. Tongue

\* The precise mode in which this medicine was taken is not mentioned. We presume it was given in a mixture in divided doses, as is prescribed in the first case.—EDITORS.

white and moist; bitter taste in the mouth; severe pain in the belly. Has been constipated for three days. Pulse forty.

Ordered, linseed and barley water for common drink. Mixture with gum and a drachm of the sulphate of alum. Purgative clyster. Strict diet.

In the evening, symptoms increased. Movements of the arms frequent; powerful cramps in the legs; excruciating pain in the belly; bowels continue constipated; tenesmus.

To take sulphate of alum two drachms; two purgative clysters. Six drops of croton oil to be rubbed around the navel.

March 1st.—In the same state. Bowels not open.

Sulphate of alum two drachms. Two oily injections.

In the evening, still the same.

To take two drachms more of the alum.

2d.—No alteration. M. Kapeler, still confiding in the medicine, which had never disappointed him, prescribed again two drachms of the sulphate of alum, and three oily clysters.

3d.—Much relieved. Has had four motions in the night, and made water freely. Pulse nearly natural; he says he is well.

Ordered one drachm of the sulphate of alum, and broth.

5th.—Free from complaint.

CASE V.—L. Felix, of a bilious temperament and weak constitution, aged eighteen, a house painter by trade, was admitted the 19th April. He had been attacked with colica pictonum five days ago. The disease was well defined: acute pains in the abdomen, which were neither increased nor diminished on pressure; bowels constipated; tenesmus; retraction and hardness of the belly; nausea and vomiting of greenish and filmy matter; tightness in the præcordia; features of the face altered; tongue dry and foul; pulse slow; headach; paroxysms of dyspnœa. All these symptoms yielded to a drachm of the sulphate of alum, and to a purgative enema, as to a charm. He had eight stools in the night.

The same treatment was continued for three days, and he was discharged perfectly cured.

CASE VI.—P. Racine, of a strong constitution, and of a bilious and sanguineous temperament, aged forty-five, a house painter, had suffered from the disease seven times.

Symptoms: May 1st.—Slight pains in the hypogastrium; loss of appetite; tongue dry and white; breath fetid; headach; numbness of the arms, principally the right; loss of recollection of nouns and numbers; pulse slow; constipated bowels; urine acrid, and in a small quantity. These symptoms had existed for six days.

Ordered one drachm of the sulphate of alum in a mucilaginous mixture, and a purgative enema. Linseed tea for beverage.

June 1st.—Has had five or six motions during the night, and declares that he is cured. The pains, numbness, and headach are removed. He cannot count up to five.

Continue medicine. Broth diet.

2d.—Continues better.

3d.—Memory perfect. Discharged cured on the 7th.

CASE VII.—P. Mahille, of a weak constitution and bilious temperament, twenty-three years of age, a house painter, had been twice attacked with colica pictonum. He had now been discharged one fortnight from La Charité, with every appearance of being permanently cured. He had avoided, since, the exciting causes of the disease; and still, eight days afterwards, it returned with more severity than ever. He was admitted into the Hôpital St. Antoine, July 5th.

Symptoms: Extreme depression of mind and body; dilated pupils; abdomen retracted, and *very painful* on pressure; continual and violent colic; no stool for two days; frequent nausea, no vomiting; wandering pains and creeping sensation in the arms; spasms of the lower extremities; headach; tongue dry, and rather black; bitter taste in the mouth; pulse thirty-two; skin cold and moist.

Ordered a mixture with gum, one drachm of the sulphate of alum. Purgative enema.

6th.—No motion. Pulse thirty; vomiting of greenish matter.

To take two drachms of the sulphate of alum; two oily clysters.

7th.—No alteration. No motion.

To take three drachms of the sulphate of alum, and to have an oily injection every half hour.

8th.—Colic diminished; pulse thirty-five. Still no evacuation from the bowels.

Medicines continued. Three drachms of alum repeated in the evening.

9th.—Had a copious motion in the night, and was immediately relieved. Pulse forty; tongue moist and white.

Remedies as before.

10th.—Has had two motions this morning.

Continued to take three drachms of the sulphate of alum till the 13th. On the 16th, discharged well.

CASE VIII.—J. Roblin, of a strong constitution and nervous temperament, forty-six years of age, by trade a brazier, was attacked, the 20th July, with violent colic, which obliged him to roll upon the ground. The belly was surrounded by a towel, very tightly bound. He had drank milk freely, and used several clysters, to no purpose. The disease increased in severity, and on the 23d the following symptoms were present: Face pale and stupid; headach; loss of appetite; tongue white and moist; bitter taste in the mouth; dragging sensation in the stomach; pain around the navel, relieved by pressure; retraction of the belly; spasms of the arms; urine scanty, bowels constipated; pulse thirty-nine; skin cool and dry.

Ordered barley water for common drink; mixture with gum; sulphate of alum one drachm; purgative enema.

24th.—Better. Has had three motions in the night; urine copious in quantity. Pulse forty-

six; belly still painful; numbness in the legs; spasms of the arms have ceased.

Remedies continued.

25th.—No pain in the belly; numbness of legs diminished; pulse fifty-five. Two motions.—To continue medicines.

26th.—Convalescent. Discharged July 2d, cured.

CASE IX.—N. Dereux, of ordinary constitution and bilious temperament, fifty-one years old, a brass founder, felt, on the 18th July, slight colic, and an itching and creeping in the limbs; in the evening, trembling of the arms. He continued to work till the 24th; but, as the disease now became more severe, he was admitted into the hospital.

Symptoms: Face pale and anxious; tongue covered with a yellow mucus; bitter taste in the mouth; no appetite; excessive pain in the belly, particularly in the hypochondria; no increase of pain on pressure; heartburn, nausea, and vomiting of a greenish matter; urine scanty, bowels constipated; great debility; spasms of the limbs. Has passed a sleepless night. Pulse very slow.

Ordered, linseed tea and barley water for drink. Mixture with gum; one drachm of sulphate of alum. Purgative clyster.

27th.—Greatly improved. Pulse nearly natural; all the symptoms diminished in severity. Has had three motions, and an abundant discharge of urine. He afterwards slept very comfortably.

28th.—No complaint. Appetite good.

To take half a drachm of alum.

Discharged, the tenth day, well.

CASE X.—P. Fournier, forty-five years of age, house painter, of a strong constitution and sanguine temperament, has suffered eight attacks of metallic colic. He has always been treated at La Charité, and has generally left that hospital with paralysis of the left wrist. For the last attack, he was six weeks in the Hôtel Dieu, after having been two months in La Charité. Since the first occurrence of the disease, he has almost always felt slight colicky pains; his bowels have been alternately constipated and relaxed; in short, his health has never been completely established.

September 22d.—Fifteen days ago, after his work, he was attacked with rather violent colic and purging; weakness in the limbs; loss of appetite, nausea, no vomiting, has continued, with varying symptoms, until the present time. The symptoms that now exist are obstinate constipation, tenesmus, and weight at the fundament; giddiness; scanty urine, of a red colour, and with very copious sediment; violent colic, which is neither increased nor relieved by pressure; extreme weakness; ardent thirst; tongue white and moist, mouth foul. Has had no sleep for five nights. Cramps and spasms in the limbs, principally on the left side. The left forearm was yesterday so senseless that, when it was placed near a powerful fire, he did not feel it. Pulse thirty; skin cold and dry.

Ordered, linseed tea for drink. Mixture

with gum; one drachm of sulphate of alum. An emollient clyster.

23d.—Much better. Pulse 120: all the symptoms milder; has had some sleep. Bowels opened eight times one hour after the medicine; copious discharge of urine.

To continue the remedies.

24th.—Complains only of slight weakness in the left side, which was yesterday quite benumbed. Appetite good. Has had no sleep in the night; bowels been open twice; frequent inclination to make water.

Medicines to be repeated. Broth diet.

25th.—Improved in every respect. He has walked in the ward, and amused himself with reading. Still complains of want of sleep.

To take half a drachm of alum. Broth diet, and a little soup.

26th.—Free from pain. Cramp of the left arm, which is no longer benumbed. He cannot walk up stairs. Has had one motion; no sleep.

Remedies as before. A mild anodyne pill. A little meat allowed.

27th.—Better in every respect. Still want of sleep.

28th.—Well. Has slept all night. Has regained his strength.

After a detail of these cases, it is presumed, by M. Montanceix, that the efficacy of the practice of the Hôpital St. Antoine must be established. Thirteen years' experience have proved the value of the proposed remedy, which is both innocent and effectual.

It is to be observed, that the subject of the third case had only left La Charité seventeen days, when the disease returned with the most alarming symptoms, which were quickly removed by a few drachms of the sulphate of alum. In the seventh case also a relapse occurred, without fresh exposure to the original cause of the malady, after the patient had been discharged eight days from La Charité. Case the tenth requires but little comment; it clearly proves the efficacy of the treatment proposed.

Neither inflammation of the stomach or bowels has ever occurred. In most cases, three or four drachms of the alum were sufficient to render the patient convalescent, and in no one instance has a relapse happened. M. Montanceix has seen the patients frequently after their discharge, and is therefore able to speak confidently upon this point.

It will be perceived that the requisite dose of the remedy is not always in proportion to the severity of the disease. Cases, which commenced with very alarming symptoms, yielded to two or three drachms; others, which appeared mild in their character, resisted even eight or ten drachms. The physician must therefore act according to circumstances, but the first dose should not be more than one drachm.

The sulphate of alum is asserted to be the best remedy we possess against the metallic colic. We think, observes M. Montanceix, that it will entirely supersede every other medicine, if its effects are impartially compared with other modes of cure.

Alum has been before much extolled as a remedy in colica pictonum, although it has been of late but seldom used in this country. If it should be found, as is stated in the above interesting paper, that a relapse never occurs after its employment, it should certainly not be neglected. Dr. Grashuys considered alum as a specific in this disease.\* Dr. Percival gave it in doses of fifteen grains every four or six hours, and he declares with unvarying advantage.† The same plan of treatment has also been highly recommended by the German physicians.—EDITORS.

From the London Medical Gazette.

**CASE OF PNEUMO-THORAX**, with an account of an Operation performed for its relief, the Effects of the Operation, and the Appearances on Dissection. By DR. JAMES JOHNSON.

Mr. Cornish, surgeon, residing in Milner-Place, near the Cobourg Theatre, and aged about 27 or 28 years, became affected with dyspnœa and symptoms of thoracic inflammation about the latter end of November or beginning of December last, which he neglected for many days, and continued to pursue his avocations in the three branches of the profession. About the 15th or 16th of the same month he was accidentally seen by Mr. Cooke (an intelligent practitioner,) of Bridge-street, Lambeth, who strenuously recommended sanguineous depletion, confinement to the house, and the other items of the antiphlogistic treatment. It was with difficulty he could be persuaded to take to his room, but he was too ill to go on longer with his practice.

On the 19th or 20th of December Dr. Johnson was requested to see Mr. Cornish, and found him in the following condition:—The patient was of the scrofulous character; he was lying on a sofa on his right side, breathing with considerable difficulty, and frequently coughing; the expectoration was scanty, and extremely tenacious, but without any purulency; the pulse was 130, sharp, and wiry; skin not very hot nor dry; tongue moist, thirst moderate; right cheek flushed; urine high-coloured and scanty. He complained of great difficulty of breathing, had pain in the centre of the chest, and could only lie on the right side. On uncovering the thorax, the muscles of respiration were seen in violent action, but the breathing was principally carried on by the diaphragm. There was no perceptible difference in the size of the two sides of the chest, but a very remarkable difference in the sound emitted on percussion: the *left* side sounded louder than natural, the right sounded considerably duller than natural. On applying the ear to the *left* side, which sounded so well, little or no respiration could be heard;

on listening to the *right* side, which sounded so dull, the respiration was very loud, and accompanied with much wheezing. The heart was felt beating rather to the *right* of the middle of the sternum, and no trace of it could be felt in the *left* side.

These phenomena appeared to Dr. Johnson to be very unfavourable; but as inflammatory action was still unequivocal in the case, Dr. J. advised Mr. Cooke (who kindly and zealously attended his afflicted neighbour till the last) to take away more blood, both generally and locally. Digitalis, colchicum, and antimony, were also given, in powerful doses, with the view of making an impression on the circulation.

December 21.—The urgency of the dyspnœa was a little, and but a little, relieved by the depletion; the blood was remarkably buffed and cupped. On examining the chest this day, Dr. Johnson and Mr. Cooke found that the left side was even more sonorous than before, and the respiration there still more indistinct; the pulsation of the heart was rather farther to the right; the right side very dull on percussion, and the respiration very noisy and confused. But a most important feature of the case now attracted attention—namely, the METALLIC TINKLING (*tintement métallique*), which was distinctly audible in the left side of the thorax, not only when the patient coughed or spoke, but even during every inspiration and expiration. Dr. Johnson had now no doubt of the existence of PNEUMO-THORAX, as every person who put the ear to the chest heard the tinkling as plainly as himself. Upon accurate examination, the left side was found to be sonorous back almost to the spine, which led to the conclusion that the quantity of serous, purulent, or sero-purulent effusion, was very small in quantity when compared with the aeriform extravasation. What was now to be done? There were still symptoms of thoracic inflammation present; and to quell these, and promote a free expectoration, every mean that could be devised was put in force. The next five or six days were consumed in the furtherance of these indications, but with no effect in mitigating the difficulty of breathing, which, indeed, gradually increased, the pulse seldom coming under 130 in the minute, with great and distressing jactitation.

In the course of the above period several medical gentlemen saw the patient, and Dr. Walshman was added in daily consultation with Dr. Johnson and Mr. Cooke.

On Monday night, the 29th December, the patient nearly expired from suffocation; and next morning (Tuesday, the 30th) Dr. Johnson explained to the patient the nature of the case—namely, that there was an aperture in the left lung, through which air was extravasated into the left pleural cavity, which cavity also contained some fluid, the precise nature of which could not be ascertained. It was stated to Mr. Cornish that the increasing collection of air was pressing severely on the right lung, that it had already pushed the heart into the right side of the chest, and that

\* Tentam. de Colica Pictonum, et App.

† Obs. and Exp. on the Poison of Lead. 1767.

he saw no prospect of relief but from an operation.

Dr. Blicke, of Walthamstow, examined the patient on Tuesday morning with Dr. Johnson, and was so convinced of the existence of pneumo-thorax as the cause of the dreadful dyspnœa, that he volunteered to perform the operation. Things, however, were not sufficiently ripe for such a step, and Dr. Johnson requested the patient to name a surgeon of eminence to join in the consultation. He named Mr. Lawrence, and Dr. Johnson waited on Mr. L. to request his opinion on the case. Mr. Lawrence, Dr. Walshman, Mr. Cooke, Mr. J. H. Johnson, and some other medical men, met at three o'clock on that day. Mr. Lawrence accurately examined the patient: he was lying on his right side, as usual, breathing most laboriously; his countenance sunk; the pulse between 130 and 140, weak and somewhat irregular; the skin was cool and somewhat moist; he had had no sleep for many nights. On laying bare the chest, the action of all the respiratory muscles was painful to behold, and it was evident that but a very small portion of air could be taken in at each inspiration: there was no perceptible difference in the size or shape of the two sides; the *left* sounded hollow throughout almost its whole extent, when Mr. Lawrence struck it; the right side emitted an extremely dull sound. The apex of the heart was now beating rather to the right of the right nipple. When Mr. Lawrence applied his ear to the left side of the thorax, he distinctly heard the metallic tinkling,\* as did every one of the medical gentlemen then present. The respiration was loud and rattling in the right lung, and the expectoration muco-purulent, with streaks of blood and many black particles.

On retiring to consult, it was the opinion, not only of Mr. Lawrence, but of all the other attendants, that Mr. Cornish was so near death as to render any operation hazardous, if not unavailing; indeed, it was believed that the patient would most likely expire during such an operation as was contemplated. Mr. Lawrence, however, candidly avowed that he was satisfied of the existence of PNEUMO-THORAX, both from the confidence of Dr. Johnson's diagnosis, and from the phenomena which he had himself observed during the examination by percussion and auscultation. He also stated it as his opinion that, under more favourable circumstances, and with the same kind of phenomena present, the operation of paracentesis thoracis would be warrantable, as the only probable mean of affording relief, whether temporary or permanent, from the difficulty of breathing resulting from the pressure of air and other fluid extravasated in the cavity

of the pleura. An anodyne was prescribed. The gentlemen separated without any resolution to meet again, as Mr. Cornish appeared to be dying; and the unfortunate patient himself expressed the most poignant disappointment that no operation was undertaken for his relief.

On that day, Dr. Johnson accidentally met with Dr. Ballingall, of Edinburgh, Dr. Picchioli of Florence, and Mr. Guthrie. To these gentlemen he related the melancholy case of his medical patient; and they having expressed a wish to see him, if yet alive, Dr. Johnson solicited them to visit the patient with him. They repaired to Mr. Cornish's house at 10 o'clock at night, and found the patient nearly in the same state of distress as he was in at 3 o'clock, when Mr. Lawrence and Dr. Johnson left him. The gentlemen above mentioned recognised the auscultic phenomena which have been already detailed, and, in consequence of a most urgent solicitation, not only from the patient, but from his sisters and several relations, Mr. Guthrie agreed, in deliberate consultation with Dr. Ballingall, Mr. Picchioli, Mr. Cooke, and Dr. Johnson, to perform the operation of paracentesis thoracis, as the only measure that offered even temporary relief from the dreadful state of suffocation to which the unfortunate patient was reduced. The danger of the case was not concealed from Mr. Cornish himself, nor from any of his friends; nor was any sanguine expectation held out of recovery, but only of relief. It was stated that the operation was neither painful nor dangerous, and that it afforded the only probable chance of life that remained. The patient and friends ardently urged the operation.

An incision was made in the anterior lateral part of the left side of the chest, between the sixth and seventh ribs, and the pleura cautiously opened with the scalpel. At that instant a rush of air issued forth, with a loud hissing noise, and strong enough to extinguish several candles, had they been near the orifice. The relief was almost instantaneous. The patient turned on his back, and breathed with comparative freedom, expressing the highest sense of gratitude for the operation. He was turned round on the left side, but no fluid came from the wound. A piece of linen was placed over the orifice and the medical gentlemen retired. The relief continued for some hours, and then the difficulty of breathing returned to a certain extent.

Wednesday, 31st.—Mr. Guthrie, Mr. Cooke, Dr. Johnson, and several others, visited the patient at half-past twelve o'clock, and found him labouring under a considerable degree of dyspnœa, though not near so much as before the operation. It was found, on examination, that the wound was closed. The left side sounded nearly as sonorous as ever, and the TINTMENT METALLIQUE was perfectly audible. A director was introduced in the wound, and a rush of air instantly escaped, with immediate relief, as in the first operation. A probe-pointed bistoury was passed in, and the

\* Some of the medical gentlemen present, and particularly Mr. J. H. Johnson, compared the METALLIC TINKLING to the sounds emitted by a musical snuff box; and this, in reality, is a more familiar, as well as a more exact similitude, than that which Laennec has employed.

opening in the pleura extended to the size of half an inch. The pulse had fallen to 120, the countenance was good, skin moist, expectoration more copious, and muco-purulent. On examination of the left side immediately after the escape of the air, no "TINTEMENT METALLIQUE" could be heard by any of the medical gentlemen. The patient took nourishment this day, and was seen by several medical practitioners. In the evening, when Dr. Johnson visited him, the patient was not so well, and a probe was again introduced, when air escaped with some noise. Twenty drops of laudanum were given in a saline draught, and the patient was left.

Thursday, 1st Jan. 1829.—On visiting Mr. Cornish this day, the medical attendants were agreeably surprised to find that he had had several hours of tranquil sleep, and that for the first time during some weeks; that his breathing had been easy, the expectoration more copious, and inclining to purulency; the pulse reduced in frequency, and more expanded; the appetite good. He got out of bed this day without assistance, went to the commode, and had a natural motion. Mr. Lawrence saw the patient, and pronounced him greatly relieved. On examining the wound, a canula was pushed in, and a taper was held near it. During inspiration the canula was closed with the finger, so that no air could enter the chest; and during expiration, the finger was removed from the canula, when a rush of air always escaped. This was continued until no doubt could remain as to the fact that part of the air drawn in by the mouth was thrown out of the wound at each expiration. This phenomenon, and especially the large quantity of air thus thrown out, proved that a considerable aperture of communication existed between the bronchia and the cavity of the pleura—a circumstance which greatly lessened the hopes of recovery. It was found that since the operation the apex of the heart beat about an inch and a half, or two inches nearer the central line of the thorax than before. The pulsation was still, however, to the right of the line. The patient continued comfortable through the day; but Mr. Cooke was called up in the night, and found him greatly oppressed. The canula was re-introduced, and some relief followed, the wound being covered with a piece of gauze.

Friday, Jan. 2, 1829.—It was but too evident this morning that the unfortunate patient was sinking. He had a strong convulsion early to-day, and about one o'clock he expired.

*Post Mortem Examination.*—Mr. Cornish being of the Hebrew religion, great difficulties lay in the way of an examination post mortem; but the friends and relatives of the deceased evinced much liberality, and leave was ultimately attained for dissection, though such a process was almost unprecedented among the Hebrew brethren. Previously to the examination, which was conducted by Dr. Hodgkin, and witnessed by a great number of

medical men, Mr. C——, a surgeon of the Hebrew religion, who had frequently visited the deceased during his illness, demanded of Dr. Johnson what were the morbid appearances which he expected to find? Although this was a question which it would not be always very charitable to ask before a dissection, yet Dr. Johnson did not decline the answer, which was made in the presence not only of the above medical gentlemen, but of a number of the patient's friends.—"*The disease was pronounced to be pneumo-thorax; and the morbid appearances would be a collection of air and some other fluid in the left side of the chest; collapse of the corresponding lung; aperture in the lung capable of giving free vent to air from the lung to the cavity of the pleura; displacement of the heart; probably tubercles in the right lung.*"

Dr. Hodgkin then opened the body. On raising the sternum the heart was found rather to the right of the median line of the chest. The left lung was collapsed to one-fifth of its natural dimensions. The vacant space was filled with air, and about fourteen ounces of turbid serous fluid. The pleura costalis and pulmonalis presented marks of inflammation of a few weeks' standing—viz. some thin false membranes, were easily separated by scraping with the scalpel. There were no marks of any more recent pleuritis, even in the vicinity of the wound, there being only a slight ecchymosis between the pleura and subjacent cellular tissue, for the space of a few lines around the incision. A tube was inserted into the trachea, and air blown into the lungs. The left lung expanded to a certain extent, and air was heard to bubble out. The lung was then carefully removed, and an aperture was immediately recognised at the division or cleft between the two lobes. The tube was inserted into the bronchus leading to the left lung, and Dr. Johnson blew in air. It rushed forth at the aperture, and extinguished a taper that was held near it. The aperture itself was then more accurately examined. It was circular, and capable of admitting a crow-quill. It was evidently fistulous, and of several weeks' standing. It was found to communicate with a very small excavation formed by the softening down of some tuberculous masses, and into this small excavation a bronchial tube was seen to enter. Thus the communication between the trachea and the cavity of the chest was distinctly traced through a bronchial ramification, a very small tubercular excavation situated on the very surface of the lung, and an aperture through the pleura pulmonalis. The left lung presented some trifling tuberculation, but was not materially diseased.

The right lung was much more tuberculated; but the tubercles were principally in a quiescent state. There was no other disease in the chest. Dr. Hodgkin formally declared that every iota of the diagnosis was verified by dissection, and every individual present agreed in this declaration.

Laennec, who first described pneumo-thorax systematically, and who must have seen

many fatal cases of it, does not appear ever to have witnessed or practised an operation for its relief, except in one instance, where the auscultic indications of pneumo-thorax being very evident, a sense of fluctuation perceptible, and the oppression rapidly increasing, an incision was made between the fifth and sixth ribs, near their middle. M. Laennec's words are, "No matter flowed, although the passage of air by the wound during respiration proved the penetration of the chest by the incision." The patient died in four hours after the operation. On puncturing the side, near the junction of the third rib with its cartilage, a large quantity of foetid gas made its escape. On making another incision, about the middle of the fourth intercostal space, a large quantity of pus flowed out, of an intolerably gangrenous factor. The reason of this want of success in evacuating the pus, was adhesions in different parts of that side. The case was evidently one of empyema combined with pneumo-thorax, and therefore not parallel with Mr. Cornish's.

M. Laennec, in speaking of the operation for pure pneumo-thorax, believes that it has sometimes been performed *by accident*—namely, where the chest has been opened for empyema, or hydrothorax, and only air has escaped. The above authority gives it as his opinion that the operation offers a far greater chance of success in simple pneumo-thorax (such as Mr. Cornish's case) than in cases complicated with empyema, phthisis, or other serious lesions. In the case forming the subject of this paper, there was no disease in the chest incompatible with life. There was no organ irrecoverably altered in structure, excepting perhaps the fistulous aperture in the left lung; and therefore the patient died from impeded function of that portion of lung which was not collapsed, viz. the right lung. The main cause of the impeded function in the right side was pressure of the air collected in the opposite side; and nothing but an operation could relieve this. Laennec distinctly states it as his opinion that the operation should be performed *whenever the life of the patient is threatened by suffocation*. No one will deny that Mr. Cornish was threatened with this dreadful death.

In this country there is but one other case on record where the operation was performed for pure pneumo-thorax, and the operation was successful. The circumstances of the case, however, were different, and the diagnosis was infinitely more easy in the one than in the other, as will be seen. The case is recorded in the Philosophical Transactions for 1823, by Dr. Davy.

A soldier was sent home invalided from the West Indies, for hæmoptysis, *which had succeeded a severe fall on the left side of the chest, received eighteen months previously*. He was admitted into the Military Hospital of Chatham on the 9th of May, 1823. On the morning of the 13th, after a violent fit of coughing, symptoms of pneumo-thorax came on suddenly, and continued increasing till the 21st. "The

most prominent of these symptoms were (to quote the words of Dr. Davy) a feeling of extreme tightness about the chest and abdomen; rapid and difficult inspirations, between 30 and 40 in a minute; great anxiety of countenance and agitation of mind, accompanied by a small pulse of 130; cold sweats, frequently breaking out on the neck and face; considerable prostration of strength. On examining the chest, *the left side was found more protuberant, and, in all its dimensions, larger than the right*; it was tense, and, on percussion, sounded remarkably hollow and tympanitic, giving the idea of its being distended with air. The heart was found beating under the right mamilla."

Under these circumstances it was resolved, on consultation, to tap the chest, which was accordingly done in the following manner:—A trochar was attached to an empty bladder, and the parietes of the chest punctured between the eighth and ninth ribs,\* the integuments and intercostal muscles being previously divided with a scalpel. A little air only rushed out, and as it was concluded, from the symptoms continuing, that its escape had been prevented by adhesions of the pleura at the point which had been perforated, the operation was repeated next day. The puncture was now made just below the left papilla, when on withdrawing the stilet into the bladder, a large quantity of air rushed out and distended it. The bladder was now separated. Air continued to rush from the chest for several seconds, "as if from a blow-pipe." When this ceased, and when the air began to pass inwards during inspiration, the canula was withdrawn, and the wound healed. The relief to the patient was sudden and great, and he continued to improve till the 17th of June, when the account closed. No farther history of the case appears to have been published. The heart was still felt beating on the right side, and "the fluctuation of a fluid was perceptible in the left."

It will be obvious that this was a case much more easily discriminated than that of Mr. Cornish. The eye alone showed that the left side was distended with something, and percussion showed that it was chiefly air. The operation was as plainly indicated as in empyema, and auscultation does not appear to have entered into the means of diagnosis.

It differed in another very important respect from the case of Mr. Cornish. When the air was evacuated, the wound was closed, and no more air became accumulated. This proves one or other of the following circumstances—viz. either the original aperture in the lungs, through which the air had passed out, became closed before the operation, or, what is not unlikely, the air was generated in the cavity of the pleura after the effusion of some purulent or sanguineous discharge; and

\* This was certainly rather low, as the attachments of the diaphragm must have been touched in the operation.

when once evacuated was no longer formed. In either case the circumstances were much more favourable for recovery than in Mr. Cornish's case, where the aperture in the lung had become actually fistulous, and capable of affording a stream of air sufficient to extinguish a candle. It is worthy of remark, that a general adhesion of the pleura costalis and pulmonalis, from preceding pleuritis, would be a complete safe-guard against pneumothorax, and the partial adhesions would render the disease comparatively harmless, by preventing such accumulation of air in one side of the chest as would much compress the lung of the other. This was evidently the case in Dr. Davy's patient.

From the facts already stated, it might be fairly inferred that, had the operation been performed at a much earlier period, in Mr. Cornish's case—in short, when the pneumothorax was first ascertained, and when the difficulty of breathing was urgent—and had the aperture in the lung healed, as it probably would have done, his life might possibly have been saved.

The case, at all events, must form a precedent for the safety of the operation; for the relief, whether temporary or permanent, which it affords to one of the most dreadful kinds of human suffering—suffocation; and for the certainty of diagnosis afforded by auscultation. It has already formed a precedent of another kind—permission to examine the Hebrew dead. Such was the intense interest excited among a large circle of the patient's Jewish friends, that a law hitherto considered as almost insuperable, was broken through, in order to determine whether the operation had been fully justified, not only by the relief obtained while living, but by the evidence to be drawn from the corpse.

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From the Journal des Progres des Sciences et Institutions Medicales.

#### ELEPHANTIASIS OF THE SCROTUM.

The following case is related by Professor Delpech, in the second volume of the *Chirurgie Clinique de Montpellier*.

A native of Perpignan, aged 35 years, of strong constitution, and descended from healthy and robust parents, had enjoyed good health up to the age of 18 years. At this period he was employed in the baking business, and contracted a gonorrhœa, which yielded to demulcents and some mercurial preparations.

When 27 years of age, he served in the cavalry; about this period, a small ulcer made its appearance on the prepuce, and was slightly cauterized; this operation was followed by acute pain and violent inflammation. The disease was treated by mercurial frictions. The ulcer had not entirely cicatrized at the expiration of three months, but equitation, from which he had hitherto abstained, now

renewed the pain and inflammation. The engorgement made such progress, that in the course of two months it involved the whole of the prepuce; it gradually, however, became more indolent; and the skin, which was infiltrated, became hard, tuberculated, and marked by deep furrows.

By degrees the scrotum participated in this alteration, particularly towards its inferior part, where the skin was brown, indurated, thickened, tuberculated and traversed by deep furrows. The subjacent cellular tissue likewise participated in the engorgement. The resulting intumescence had at first an œdematous feel, but gradually increased in consistence, till it acquired a considerable degree of hardness and weight, by which the scrotum was drawn down till ultimately the penis and testicles disappeared in the common mass of the tumour.

During the following year, the disease made rapid progress, and the tumour became very irregular towards its inferior part; its increase in the succeeding three years was much slower; several mercurial preparations were unsuccessfully employed.

After the lapse of seven years from the commencement of the disease, the patient was sent to Montpellier. The skin of the penis, scrotum, and the cellular tissue of this part presented all the characters of elephantiasis. The tumour was pyriform, flattened transversely, and divided into three principal lobes. It reached as far as the calves of the legs, and was suspended by a neck eighteen inches in circumference at its smallest part, and occupied all the space included, between the pubic region, the groins and anus; neither the spermatic chords nor the inguinal rings could be distinguished. The skin covering the neck was greatly thickened in front, where it corresponded to the os pubis; it was, however, capable of being thinned by pressure, which appeared to expel the serum from the cellular tissue; while upon the sides and back part it preserved its natural plianthness, and even appeared to have been thinned by the elongation. There was some infiltration into the subjacent cellular tissue, which disappeared when pressure was made with the fingers.

In the lower half of the tumour, the skin was indurated, embossed, and adherent; the whole mass presenting great consistence; the patient complained (when it was compressed laterally at the distance of about a foot from the abdominal rings) of a peculiar sensation like that felt when the testicles are pressed.

Of the three lobes which terminated the tumour below, the anterior presented at its lower part, a large transverse groove, at the bottom of which was a deep sinus which represented the opening of the prepuce, and by which the urine passed. No trace of the penis could be distinguished, but the patient stated that he experienced at intervals, erections and emissions.

Progression and the standing posture were both very painful; the digestive functions were unimpaired; respiration unaffected; the

skin perfectly sound in every other part of the body, except that it had a remarkable whiteness, and on the face was slightly lead-coloured.

It was thought that if the sexual organs still preserved their integrity in the midst of the tumour, they might be disengaged by a careful dissection, and afterwards covered by layers formed in the sound parts of the skin. The hope of success was authorized by the erections and seminal emissions. The following operation was accordingly performed on the 11th September, 1820.

The patient was placed horizontally with his buttocks near the edge of the bed, his legs and thighs flexed and separated, and supported in this position by assistants. The tumour was surrounded about its middle by a large and strong band, and the extremities given to assistants, kneeling beside the patient on the bed, in order that they might move it as might be necessary during the operation. M. Delpech then traced with ink the course of the intended incisions. The two principal ones began each at the inguinal ring, and passing downwards, encircled the neck of the tumour and terminated at an acute angle in front of the anus. Two other incisions, beginning below the anterior fifth of the first, described a curvature with its concavity outwards, and terminated four inches lower down, at the point where a vertical line would have made the tangent of this new curve; lastly the lower extremities of the two last were united by a transverse incision. By these five incisions three flaps were formed; an anterior, of a pentagonal form, fixed by a narrow base which might represent a sixth side, and two semicircular incisions, separated by the former, and united posteriorly near the anus. The lateral flaps were first dissected off, and afterwards the middle, or anterior, as far as its base, or on a line with the crural arch and pubis, taking care to include only the skin, and that part of the cellular tissue which was loose, and entirely free from infiltration. After securing a few vessels, an incision several inches in length was made beneath the anterior extremity of the right lateral flap, following the axis of the ring; the external pubic arteries were thus exposed, and secured on a level with the groin. A similar incision was made on the left side. Increasing the depth of the incisions, the spermatic chord was exposed and recognised by its muscular envelope which appeared redder, thicker, and broader than ordinary. The cellular tissue in the immediate neighbourhood of the chord and testicles, far from being indurated and lardaceous as in the rest of the tumour, was, on the contrary, loose, transparent, permeable, and tore with facility. M. Delpech availed himself of this disposition to penetrate as far as the testicles, using the index finger as a guide, in order to expose this organ that it might not be injured in making the necessary incisions into the tumour. It was distant a foot from the ring, rather larger than natural, but was white, pliable and soft, and preserved its

sensibility unimpaired. It was more firmly attached at its posterior part, than was the spermatic chord in any part of its course. There was, however, nothing in these adhesions resembling the proper tissue of the tumour. The tunica vaginalis contained no fluid. The testicle was disengaged and laid upon the abdomen, after the chord had been exposed as far as the ring. The same course was pursued with the right testicle, which was found in similar circumstances, except that it was more free than the left.

Searching for the cavernous bodies, the operator introduced the left index finger into the cavity through which the urine had flowed, and which represented the opening of the prepuce; making use of it as a guide for the incisions which he was obliged to make from below upwards, in order to lay open the species of canal formed by the tumour, and expose the glans. When this was recognised by the touch, about the height of a foot, greater circumspection was used in continuing the incisions to expose it, and the vertical incision was prolonged, so that the tumour was divided in front, from below upwards, as far as the symphysis pubis. The dissection was continued on both sides, and the cavernous bodies and corpus spongiosum exposed, after having divided the prepuce around the circumference of the glans. The penis, when completely dissected out, was laid upon the abdomen with the testicles. The operation was then continued, in order to detach entirely the neck of the tumour. The left side of the arch of the pubis was first exposed, then the corresponding cavernous body, and successively, the canal of the urethra with its bulb and membranous portion, the erector penis and ejaculator seminis, the sphincter ani, the right cavernous body, and lastly, the corresponding branch of the os pubis.

After the detachment of the tumour, the artery of the septum scroti, the dorsal arteries of the penis, the transverse arteries of the perineum, those of the bulb on both sides, and several branches of the inferior hemorrhoidal, were secured by ligatures, which, in consequence of their great number, were cut away near the vessels.

The testicles were placed upon the perineum on both sides of the root of the penis, the excessive elongation of the spermatic chords rendering it necessary to make them describe several curvatures, in order that they might occupy as little space as possible. The lateral flaps of the integuments were brought together, and retained by the interrupted suture as far as the root of the penis; the anterior flap was then brought down and rolled around the tumour so as to envelop it completely; it was fixed by several sutures, which were made to include a part of the cellular tissue of the penis, in order that it might not slide down by its own weight, and lose the delations which it was desirable to maintain. The sides of the anterior flap, which were not employed in covering the penis, were united by sutures to the upper part of the lateral

flaps, which were not used in covering the testicles and their chords.

After the operation, sixty drops of laudanum were given to the patient, to mitigate the violent pain of which he complained; pledgets lightly spread with cerate were laid along the approximate edges of the integuments, and the whole covered by pieces of lint, and compresses, retained by a T bandage.

The next day, the extremity of the flap covering the penis, was found in a state of mortification. The gangrene, however, was soon arrested, and involved only about one-third of the flap. Two days after the operation, the approximated parts were united, except just in front of the anus, where there was a small opening, through which a little serum issued when pressure was made.

At the expiration of nine days, the sutures were removed; and two months after the operation, the cure was complete in all its parts, notwithstanding some trifling incidents, which from time to time occurred to interrupt its progress. The envelope of the penis was adherent throughout its extent, and extended only to the base of the glans, which was left naked.

In February of the succeeding year, the patient was observed to indulge too freely in spirituous liquors. Some representations which were made to him, appeared for a time, to have the effect of rendering him more circumspect. Shortly after, he set off for his native province, and caught a slight cold during the journey. In a little while he resumed his former irregular habits; his health became bad, and after some excesses, he died with symptoms of hepatitis.

The liver was greatly enlarged, and in the efforts made to detach it, the fingers penetrated into a cavity filled with pus. The testicles were about the size of a pigeon's egg, their fibrous coat was of a bluish white, and the epididymi of both were apparent; they were separated from each other by an indented longitudinal cicatrix, which after the operation, performed the part of a septum. No traces of the tunicae vaginales were perceptible. The vasa differentia were followed as far as the vesiculæ seminales, which were smaller than natural. The right thoracic cavity was less than the left, in consequence of the great size of the liver.

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From the Edinburgh Medical and Surgical Journal.

**ON EXFOLIATIONS FROM THE BONES OF THE PELVIS AS CAUSING THE OBSTINACY OF SINUSES IN THIS SITUATION.** By JAMES SYME, Esq. Surgeon, and Lecturer on Surgery in Edinburgh.

Every practical surgeon must have observed that obstinate sinuses are met with nowhere so frequently as in the region of the pelvis. Those which remain after the opening of abscesses depending on carious vertebræ, or

caries of the hip-joint, are truly incurable, and being unfortunately of common occurrence, have led to the opinion that little can be done for the remedy of any sinus so situated. The patient is therefore usually committed to the power of his own constitution, nothing being attempted to cure the complaint, except perhaps the occasional injection of some stimulating wash to prevent the appearance of total neglect.

The object of the following paper is to show that the sinuses in question sometimes depend not on caries, but on death of bone, which exfoliating in some part of the pelvis far from the surface, causes continued irritation by the presence of the loose portion; whence it is proper, in the treatment of all sinuses in this part of the body not obviously proceeding from caries, to search for such exfoliations, and remove them if they are found to exist.

CASE I.—John Benn, aged 7 years, of a pale complexion, but otherwise in good health, has a small fistulous opening in the upper and back part of the thigh, a little below the tuberosity of the ischium. He suffers little pain, but when sitting is observed to rest on the sound hip. His mother states that the complaint commenced without any obvious cause about two years and a half ago, when a tumour, the size of an egg, made its appearance in the seat of the sinus. She applied to a surgeon, who evacuated, by incision, a great quantity of matter. The opening continued to discharge for a year afterwards, when a small bit of bone appeared at the orifice, and was removed by a gentleman, to whom she applied for the purpose. The sinus remained nearly well for six months, when the running again commenced, and has persisted more or less ever since, that is to say for about a year.

On introducing a probe I detected a loose piece of bone, which was readily extracted so soon as the opening had suffered dilatation by incision. The exfoliation appeared, when carefully examined, to have been detached from a spongy bone, and I concluded that the ischium must have been the one concerned, since the sinus would have opened much lower in the limb if it had originated from the femur. The boy got well immediately afterwards.

CASE II.—Soon after meeting with the case just related, I was asked to see a man whose friends believed him to be in a very hopeless state. I found a tall well made young man, who gave me the following history of his case.

Thomas Irving, aged 28, a cooper in Leith. About seven years before the time I saw him, after long and severe exercise of the muscles of the thigh, perceived a sense of uneasiness in the right hip. Soon afterwards a collection of matter formed here, and was evacuated by a surgeon, who informed him that he laboured under a *fistula in ano*, and must have recourse to an operator in Edinburgh, who would soon make him well. Having undergone various incisions, &c. he was told that his complaint was not a *fistula in ano*, and would require

time for its cure. He then applied to a quack, who tortured him in various ways too tedious for description. Returning to the regular faculty, he employed a distinguished surgeon of Edinburgh, who opened some large abscesses which formed in the thigh lower down than the original one; but finding that his complaint, though alleviated, was not cured, he determined to abjure all surgical interference for the future, and leave the affair to nature. In conformity with this resolution he permitted the disease to take its own course for several years, working at his business when not prevented from doing so by pain, &c. At last, about two months before the time I saw him, his sufferings became so excessive as to induce a departure from his plan, and he sought the assistance of a surgeon who had attended him in an early stage of his case. This practitioner found a piece of bone sticking at the orifice of a sinus and removed it; but having ascertained that there was more to come away, he tried to dilate the opening by sponge tent. The patient in consequence suffered more than ever from the pressure of the sponge and confinement of the matter. On one occasion the tent slipped in, and required an incision for its removal, which naturally suggested to the patient that the bone might have been more easily extracted in the same way; but such a proceeding not being, I suppose, in accordance with the rules of *systematic surgery*, the tents were persevered in, until the patient, reduced to despair, determined on a change of men if not of measures, and applied to me.

I found a large diffused abscess occupying the upper back part of the thigh, and extending from the hip half way to the knee. In the fold which lies between the hip and thigh there was an opening, which allowed the probe to enter fully three inches in the direction of the tuberosity of the ischium, and at the bottom of this passage I felt a loose piece of bone. The patient was pale and emaciated. Owing to weakness and pain he walked with difficulty; and the long duration of his complaint, together with its progressive aggravation, rendered him very desponding as to the possibility of recovery.

I made an incision into the abscess, and allowed several ounces of pus to escape. Next day I introduced a long straight probe-pointed bistoury into the sinus, and dilated it to the bottom so as to admit my finger, by means of which I discovered that the exfoliation lay in a cavity between the origins of the flexor muscles of the knee. Having dilated the mouth of this cavity with my knife, I easily extracted the bone, which was about the size of half a sixpence.

The patient suffered no bad consequence from this operation, and soon found himself relieved from all his previous complaints. In the course of two or three days he walked nearly a mile to my house, and by the end of two or three weeks was able to resume his occupation.

Some months afterwards he told me that

the sinus still discharged a drop or two of matter, and that he occasionally felt a pricking pain at the bottom of it. I examined with a probe, and ascertained that there was a loose fragment of bone, to remove which I again dilated the sinus down to the tuberosity of the ischium; again felt that the exfoliation lay in a cavity between the tendons; and again enlarged the cartilaginous orifice so as to effect the extraction. The piece of bone now removed was extremely small, not much larger than a barley-corn. The wound healed directly, and the patient has remained free from complaint.

CASE III.—Mr. H., a clergyman in the west country, brought his son, a tall thin lad of 14, to town, on account of a chronic abscess about the size of the largest orange, which was situate at the upper and inner part of the right thigh, over the origin of the *gracilis*, &c. This complaint was attributed by the patient to falling into a saw-pit on his side.

As there was no symptom indicating disease of the vertebræ, I hoped that the abscess would heal after evacuation. At all events there could be no doubt as to the propriety of opening it, which I accordingly advised to be done so soon as the patient returned home.

The abscess was opened without any bad consequence, though it extended very deep between the adductor muscles, but a sinus remained which resisted all the means employed for its cure: tents were introduced; washes were injected, and free dilatations of the orifice by incision were performed, but all in vain; and at length the surgeon in attendance intimated that he found his probe ascend into the cavity of the pelvis, and that he could do no more for the case. In these circumstances Mr. H. again brought his son to town and placed him under my care.

As there was still no symptom of diseased vertebræ, I strongly suspected that the obstinacy of the sinus depended on an exfoliation. With this impression I examined very carefully and repeatedly, and at last found one at the origin of the adductor muscles. The probe could be passed far beyond this, but I thought that since the loose bone was in all probability the origin of the mischief, a cure would follow its removal, and therefore proceeded to effect this without delay.

Having placed the patient on his back, with the thighs drawn up, I dilated the sinus in the direction of the *gracilis*, and then introduced my finger under this muscle, quite up to the margin of the thyroid hole. I now felt the exfoliation, which seemed to be very small, but all my attempts at extraction with different sizes of forceps (the common polypus forceps is very convenient for the purpose) proving fruitless, I enlarged the aperture leading to the bone, and then pushing my finger through, discovered that I had previously been able to feel only a small corner of it, and that the exfoliation, which was of considerable size, consisted of the inner table of the bone com-

posing the thyroid hole. I then easily effected the extraction.

The patient suffered no constitutional disturbance, and returned home in a few days. Though the sinus healed slowly, it did so progressively, and at last his father sent me the pleasing information that it was quite well, and that his son had returned to his studies in the University of Glasgow.

CASE IV.—Ninian Mackenzie, aged 22, a plasterer, in the beginning of November last asked my opinion as to a complaint which he firmly believed to be incurable. He showed me an opening in the left groin, from which there issued a thin gleety discharge, and around which there were many long cicatrices extending all the way from the pubis to the spinous process of the ilium. He also complained of a painful hardness in the lumbar region of the same side, mid-way between the last rib and crest of the ilium. There was no external tumour, but a distinct induration could be perceived on pressure, which was very painful. In addition to these complaints he mentioned that his legs were so weak as to prevent him from walking steadily, and that he had frequent desire to make water, with uneasiness in doing so. On desiring to know the history of his case, he gave me the following relation.

Five years ago the scaffold on which he was working happening to give way, he fell with it to the ground, and received in the fall a blow from one of the planks on his left loin. He felt little inconvenience at the time, and continued at the work in which he was engaged; but in the course of a fortnight he began to feel pain in the part struck, which gradually increased and extended into the groin, where a tumour about the size of an egg at length appeared, and induced him to enter the Royal Infirmary of this city two months after the accident. Leeches and other measures of a similar nature were employed with the effect of removing the tumour, but not the pain. At the end of eight days he returned home, but found himself unable to work for the following fourteen weeks. He then began to do so, when the pain, which had never entirely left him, increased in severity, and in the course of two months became very distressing. At the same time the tumour again appeared in his groin, and he now perceived that his left thigh was drawn up to the body, so that he could not extend it. The swelling then opened spontaneously, and discharged an immense quantity of matter, with great relief to all his uneasy feelings; but finding that the running continued for five weeks without any abatement, he once more repaired to the Royal Infirmary, where the sinus was injected, and very freely dilated in the groin, so as to occasion the extensive cicatrices already mentioned. At the end of two months he was dismissed incurable. He went home, and during the five succeeding months was treated by different practitioners of eminence in this city without success; indeed the means they employed were the same

as those found unavailing in the Infirmary, viz. injections. He at last concluded the disease to be hopeless, and abstained from all farther surgical treatment, working at his trade when the pain, &c. allowed him to do so.

This story, together with my own observations, led me at once to conclude that the painful hardness of the loins depended on an abscess caused by, and containing an exfoliation of bone; and that if this source of irritation were removed, as the patient was a stoutly made young man, he would soon get well.

Having explained to him my views of the case, I obtained his ready assent to any thing I might think proper for affording him a chance of recovery, of which he was naturally very desirous, not only on his own account, but on that of his wife and family, who depended on his exertions for their support.

In the presence of my friends Drs. Mackintosh and Ballingall, I made an incision about three inches long in the left lumbar region, parallel with the crest of the ilium, and cutting down to the induration, opened an abscess containing a thin fluid. I then introduced my finger, and finding an aperture through the abdominal muscles, searched for the exfoliation, which I soon detected lying on the inner concave side of the ilium, and easily removed by means of a pair of long forceps. Many large sinuses could be felt running in various directions, but not being able to discover any more loose bones, I concluded that every thing necessary had been done, and therefore dressed the wound.

The patient suffered no inconvenience in the way of constitutional disturbance, but a very copious discharge issued from both orifices for several days; it then grew thick, diminished, and ceased at the artificial aperture. It still continued, however, at the old opening; and as I found that the sinus descended into the thigh somewhat lower than the orifice in question, I dilated it downwards, after which it also soon healed; and on the third week from the operation I showed Mackenzie to my class *perfectly well*, without any pain or uneasiness of any kind, any defect in his power of progressive motion, or any disturbance of his urinary organs.

The history of these cases will, I hope, effect the great object of this paper, which is to excite a more discriminating diagnosis and active treatment of sinuses of the pelvis. As to the origin of the exfoliations I will not at present say much. It seems very evident that they cannot result from the direct effects of violence, since in all the cases detailed the bone concerned was securely protected by its situation from any such injury. In all of them, if we except the first, where no information could be obtained as to the origin of the complaint, there was violent muscular contraction, and I am inclined to think that this may have been the exciting cause of inflammation and death of the bone. The subject is curious, and worthy of investigation, but of little importance when compared with the practical benefit which may result from a knowledge of

the fact, that sinuses of the pelvis sometimes depend on loose exfoliations which will not find their way out unassisted, but which may be readily removed artificially with the effect of a speedy and perfect cure.

From the Edinburgh Medical and Surgical Journal.

**OBSERVATIONS ON GOUT.** By JAMES SANDERS, M. D. Edinburgh.

The histories and dissections now given are in themselves on this account valuable, that they exhibit the functional disorders arising from certain lesions or alterations of structure. In this place, however, these are introduced to furnish a contrast with those of gout, and also points of reference, of which we may avail ourselves in the diagnosis.

My observations published in the 97th Number\* tend to warrant the opinion, that all chronic diseases affecting the stomach, liver, bowels, heart, lungs, head, accompanied with spasms, and recurring in paroxysms, are to be considered as varieties of irregular gout. This tendency is only apparent. In the outset, therefore, I wish to erase an impression, than which nothing can be more at variance with my own ideas, nor more directly opposed to the views with which I wrote. I endeavoured to select the principal affections which the assaults of gout imitate, with the design, not of confounding the simulation with the reality, but of preventing rash decision and disastrous practice. Gout assumes the mask of erysipelas. So far from making them one, I showed the danger of mistaking the one for the other. Nor were the counterfeit affections of the chronic character alone enumerated; but with equal care some which are intensely acute; among others, *pleuritis* and *gastritis*:—not with the intention of making them and any form of gout identical; on the contrary, I am solicitous to inculcate caution in discriminating, being taught by experience, that acute pleuritis, treated as atonic gout should be, would almost to a certainty destroy the patient; while the copious abstraction of blood, which acute pleuritis demands, would immediately, or at no remote period, occasion the death of the gouty.

The following might in their progress have been mistaken for cases of chronic gout. They were of long duration; indigestion and hepatic derangement prevailed; paroxysms disturbed those organs which such gout generally attacks, nor were spasms wanting. Gout, however, had not the slightest claim to them. They could not be referred primarily either to the encephalon or spinal cord. Each commenced topically within the thorax or abdomen; organic vitiation ensued; and hence the whole system was gradually involved. This is a distinction to be remembered, that to primary affections of the nervous centre mal-

organizations of the other parts stand solely in the relation of consequences.

If it be asked, may not mal-organizations and local irritations excite fits of gout? I answer, they may; though mal-organizations and local irritations are neither gout nor the causes of it. Napoleon Bonaparte died of partially mal-organized stomach and liver, though we are not informed that he ever had gout; and if local irritations necessarily caused it, infancy during dentition would be more liable than advanced age when the teeth are decaying.

CASE I.—In the year 1813, a Leith porter, æt. about 56, applied to the Royal Dispensary, complaining of indigestion, uneasiness in the right hypochondrium, oppression at the *scrobiculus cordis*, constipation, and increasing debility. He had been treated for hepatitis, and now stomachics and gentle aperients were prescribed. He felt sometimes better and sometimes worse, but no real melioration. At length œdema distended his limbs, anasarca his trunk, and ascites his abdomen, while hydrothorax oppressed respiration. He suffered extreme agony, with a sense of tension under the right false ribs. His breathing was quick and short; the pulsations so weak and rapid, that they could not be counted; and sweat inundated particularly the upper half of his body. All this time his senses were entire. We left him in the forenoon, not expecting that he would survive many hours. At midnight his wife came to inform me that he was on the point of expiring from an excessive discharge of blood and matter *per anum*. I encouraged her with the hope, that this very event might save him, and desired her to warm port wine, and give it him as freely and as often as he could take it. Next day we found him delivered from all uneasiness, though on the very verge of the grave from exhaustion. Henceforth his health and strength recruited apace, and he wonderfully soon resumed his burdens, declaring himself better than he had been for years. A good many months had passed in this way, when one day, immediately after taking dinner, he set out to his duty, and, bearing a load on his back, fell down on the pier, lifeless.

His body was examined next day. In the *encephalon* there were irregular turgescence of vessels, chronic adhesions of the membranes, mostly by the sides of the *falx major*, and considerable serous effusion both on the surfaces and in the cavities. The stomach contained beef and barley broth unchanged. On the right side, about an inch below the pyloric orifice, the duodenum seemed distended into a sac that might hold an orange of ordinary size. Externally this sack adhered to the liver; its tunics were condensed, and resembled chamois leather; its internal surface was glistening and unequal; its orifice was circular, cartilaginous, and a little less than two inches in diameter. Nothing else worthy of remark was discovered.

CASE II.—In the year 1815, a well made little man, æt. 60, applied to me. He had long been afflicted with dyspepsia, oppres-

\* Journal of Foreign Medicine, Vol. III., page 1.

sion of the præcordia, and constipation. His appetite was good, but soon after taking food, the distress at the pit of his stomach was sometimes insufferable; and nothing afforded him so much relief as speedy alvine evacuation. He had often purgatives, which sometimes operated violently, and sometimes harassed him greatly without having the intended effect. He was melancholic and despondent, losing flesh and strength.

Moderately generous regimen was ordered; a stimulating liniment to be well rubbed over his stomach night and morning; and to be taken morning, mid-day, and evening, pills composed of tonic and laxative substances. He improved, and for more than a year, to use his own words, "he thought himself a new man." Meanwhile the radical mischief had been increasing insensibly. It was now difficult to move the bowels. He took large doses of calomel and jalap, or of the compound powder of jalap, and repeated them in the morning, *nisi prius*. In a week or two, he told me "that he found it best not to take the purgative on going to bed, because it never operated; but if," said he, "I take the dose when I get up in the morning, it operates powerfully in an hour or two." Accordingly, I advised him to continue taking it only in the morning, and to diminish it, so that he might have but one easy motion once in the twenty-four hours. This he accomplished, and again for some months believed himself independent of medical aid. Hitherto he called at my house, but at last I was requested to visit him. He was far advanced in fever, generally delirious, and in ten days more he died.

Body examined next day.—In the thorax, in the pericardium, and in the abdomen, much serum was effused, and that vascularity, the effect of vital influence failing, which has suggested the appellation of *congestive fever*, was observed. The only thing demanding particular attention was this, that about an inch and a half below the pyloric orifice on the right side there was a sac about an inch and a half in depth, and of the same extent in diameter; in its orifice, interior surface, condensation and external adhesion, resembling the one above described, but so situate, that till it was filled, nothing could pass beyond it from the stomach.

Another skull was substituted, and his encephalon was exhibited in 1817 by Dr. Spurzheim in the hall of the Royal Physical Society.

The internal plate of the cranium was deeply grooved, and adhered firmly in several places to the *dura mater*. Between this membrane also and the arachnoid were strong cohesions. The superficial vessels on the hemispheres, and remarkably on the anterior lobes, were dark and distended, as were those of the circle of Willis; and the branches entering the base of the brain, at the commencements of the fissures of Silvius, were so dilated as to impart to these spots a cribriform appearance. The choroid plexus, the vessels along the base of the brain, and those around the *crura cerebri*, *tuber annulare*, and *medulla*

*oblongata*, were all turgid, and many of them rigid. On the surfaces, in the ventricles, and in the cerebellic cavity, the collection of serum was great. The substance, however, of the *cerebrum* and *cerebellum* was sound, and so firm as to furnish an excellent demonstration, in the presence of a numerous assemblage of medical gentlemen.

CASE III.—23d August, 1828. I was called to Mrs. —, æt. 50. Her worn-out emaciated figure lay in extreme distress. Her pulse feeble, unequal, beating from 130 to 150 per minute. She was tortured in her bowels, and to them she ascribed all her suffering. She retched almost incessantly, or vomited green bile. Purgative enemata came off unmixed. Her senses were at this moment entire, and respiration tolerably easy, though both were frequently disordered. The parietes of her abdomen had fallen together in irregular folds like an empty bag; but below the umbilicus, and a little to the right, was felt a tumour, which extended over the *caput cæcum coli*, and upwards under the ribs it was smooth and hard; its interior margin passed in nearly a straight line parallel to, and about an inch and a half from, the *linea alba*. This margin was doubled inward, and could be drawn out or unfolded. She said that she had enjoyed uncommonly good health till during her last pregnancy, which happened twelve years ago. She then was very unwell, and her belly grew to an enormous size. The child was born at the full time, stout, and is living now. But from that period she declined in health, and was subject to attacks, more or less severe, of uneasiness and pain in her stomach and bowels, which were seldom opened except by the force of physic; nor would she allow that she ever had had any other ailment, unless sometimes headach. I saw her but once, and I here relate all that I could learn from herself of her case. Croton oil induced copious stools of mixed complexion, dark and green. These were followed by great relief. For three days food was taken with relish; then came on delirium, heavy respiration, difficult deglutition, inappreciable rapidity of weak pulsations, cold sweats, and cold extremities. What next supervened need not be mentioned. Next day, August 29, her body was examined.

*Encephalon*.—Appearances as usual in such cases terminating with extreme exhaustion. Partial cohesions. Serum poured out on the surfaces and in the cavities. Cerebral mass somewhat softened, and incipient *ramollissement* or mollescence in the right *crus cerebri summum*.

*Thorax*.—*Pleuræ pulmonalis* and *costalis* firmly cohering anteriorly; the upper portions of the lungs indurated, tuberculated, and containing small abscesses; water collected in considerable quantity, posteriorly, and in the pericardium.

*Abdomen*.—The liver and stomach lying lengthwise from the cardiac opening in the diaphragm to below the umbilicus; the stomach stretching under the *linea alba*, convex towards the left, concave towards the right,

where it was covered by the thin, doubled edge of the liver, the thick superior convexity of which had left the diaphragm, to take its place upon the right kidney. The remains of the umbilical cord, or round ligament of the liver, much shorter than usual, being hardly more than two inches long; the stomach diminished in breadth, the liver in all its dimensions; both sound in their structure. The tumour which extended over the *caput cæcum* was the right lobe of the liver, and the part turned inwards which could be spread out was its inferior margin extenuated. The duodenum returned upwards by the right side of the spine. The rest of the abdominal viscera were as they should be.

This case is important, especially to accoucheurs. The patient enjoyed vigorous health till her last pregnancy, during which her belly swelled to an immense size, and that distention was attended with disorder of stomach and abdominal pains, to which she was for twelve years after subject. Taking in connexion with this part of the history, the short round ligament, and the displaced liver and stomach, who can doubt, that, while the cavity was enlarging, the round ligament gradually dragged these organs out of their proper site, inducing that train of evils which terminated fatally?

CASE IV.—Mr. ———, æt. 40, intelligent, affectionate, easily agitated, had, as long as he could remember, been liable to occasional palpitation, uneasiness at stomach, flatulence, and irregular bowels. He never could go up hill without bringing on dyspnœa; and for many years he had been, particularly in inclement weather, troubled with pains in the chest, often very acute, and sometimes with hæmoptysis.

It was fixed in his mind that he should die of disease of the heart, because he had a brother who died of hypertrophy of that organ; hence he bore with fortitude any attack of disease, however severe or long, when he was assured that his heart was safe.

About eight years ago he was seized with the most excruciating spasms in the abdomen, and in the inferior extremities. As the liver was suspected, blisters and issues were applied to the right side. Convalescence was tardy, and recovery never complete. Three years ago he took what was called *cholera morbus*. Jaundice soon appeared, with other symptoms, which made him undergo the curative routine of hepatitis. On this occasion he was three months confined, after which his lungs, heart, stomach, bowels, gave him more frequent annoyance than ever, but he was always instantly relieved by free dejections. The same laxatives, however, varied in their effects, being at one time too potent, at another powerless except, that, when the purpose for which they were taken was not attained, his sufferings were greatly aggravated.

He could take with perfect ease a full inspiration, though his heart rolled ponderously, and in its motion seemed to occupy the greater part of the left, or even to encroach upon

the right cavity of the thorax. Its pulsations strong, unequal, with many pauses, were synchronous with those of the arteries of the temples and extremities.

In May last he had a smart attack resembling that of cholera, which had recently been epidemic. A few copious bilious stools made him think himself well again. In the ensuing month an attack of the same kind which, though more severe, yielded to the same means. Between this time and the end of July, he encountered three such paroxysms. Now they became so frequent, that when one ceased, he lay in terror of another. In August his whole body became yellow; and then supervened tension, fulness, and pain from the *scrobiculus cordis* all along the right side; and descending from below the false ribs a tumour of some magnitude was recognised. Incessant retching for nearly three days, and rejection of whatever was received into the stomach, harassed him. Enemata, though retained for hours, returned unmixed. At length an extraordinary quantity of dark green liquid was vomited, and soon after were procured downwards immense discharges of a deep orange colour, mixed with white, curdy masses, and scybala, like balls of pitch, and the whole nauseously graveolent. During this exacerbation the respirations were short and laborious; the pulse was feeble and rapid, above 160 per minute; and the sweat flowed in streams from the head, neck, and chest,—but the evacuations assuaged this dreadful commotion. For a few days he was quite comfortable; digestion went on well; the bowels kept regular, and stools natural; the pulsations were everywhere equable, and not exceeding 70 per minute; and besides, the tension, swelling, and pain from the *scrobiculus cordis* along the right hypochondrium were entirely gone. This happy state continued about eight days, when slight uneasiness at stomach and hiccup came, the harbingers of the same torments in all their fury. This and the succeeding paroxysm seemed to be cut short by doses of five grains of calomel and two of scammony. All the external and internal remedies that could be thought of were tried and repeated or abandoned, according to their success or failure.

His senses kept sound, and his mind wonderfully steady throughout. His ideas were sometimes a little confused, but only when he was drowsy or on awaking. During the last two months the chronic inequality in the action of the heart quite disappeared, and the alvine discharges were much improved in quality, though yellow bile was always superabundant. He was easiest lying on his back. He sometimes turned to either side, but only for a short time. Sitting up he soon became languid, sick, and faint.

Towards the end croton oil, given in doses of three drops twice or thrice at intervals of an hour, afforded effectual relief. At last, worn out with reiterated assaults, the patient died on the morning of the 7th October. Body examined 9th October 1828.

**Thorax.**—Great flow of pure serum from between the layers of the *mediastinum*. *Pleura pulmonalis* and *costalis* firmly and closely cohering all around; and the under surfaces of the inferior lobes seemed incorporated with the *septum transversum*. The pulmonic substance was sound of structure, though in the left cavity it was much compressed. The heart was as large as that of a bullock, and the enlargement chiefly in the ventricles. It had lost much of its muscularity, approaching nearly to a cartilaginous state. The left ventricle far exceeded the right, both in the size of its chamber, and in the thickness of its parietes;—one instance added to the many in which I have demonstrated the inaccuracy of those anatomists who assert, “that the thickness of the parietes of the ventricles is in the inverse ratio of their capacities.” All the valves were to a rare degree attenuated; even those of the aorta were as thin as the arachnoid coat; nor could they have much obstructed the current of the blood in any direction. The aorta all along its arch was somewhat dilated; its lining membrane of a purple colour, variegated with white specks; and there was incipient ossification at the mouths of the coronary arteries.

**Abdomen.**—Liver sound, rather small, and suspended from the peritonæum by ligamentous cords. The gall bladder of enormous size, of a square shape, very thin, and containing about eight ounces of diluted bile, of a dull yellow colour, and it appeared as if, when fully distended, it had or could have contained thrice that quantity. The stomach small, and at the middle between the cardiac and pyloric orifices drawn in transversely, as if by a small ligature; its internal membrane was very vascular; it had two compartments, the larger next the pylorus communicating by a circular opening about an inch and a quarter in diameter, the marginal ring of which was from two to three lines thick. The pylorus was rather wider and thinner than usual. A little way from the stomach the canal began to dilate into a smooth sac, which, where the *ductus communis choledochus* and *ductus pancreaticus* enter, was fully three inches wide, and then diminished so, that from one to two inches farther down, the point of the little finger could not pass. Kidneys small, and the linings of their pelves vascular. A few of the mesenteric glands indurated and enlarged. *Cætera sana*.

How are we to explain in these cases the varying effects of the same purgatives? In what way did these local affections involve the other organs, and eventually prove fatal? In the last case, why did the unequal action of the heart, which had persisted at least for the third of a century, subside, and the movements of the heart and arteries, during the few weeks of terminating life, become equalized and regular? I will resume these questions.

In each of these four examples, the general history of symptoms, and the exposition of changed structure so circumstantially corres-

pond, that to any one who comprehends that two threes make six, commentary is superfluous. But it is believed that correlativeness so evident seldom exists; nay, it is contended, that many a time the causes of dissolution are too deep for the most profound and minute anatomical research, no deviation from the healthy condition being discernible. Having found in my own range of observation not one such instance, I contrived to obtain the inspection of certain bodies after they had been opened, and in which it was declared by men of no small reputation, that nothing could be detected illustrative either of the disease or of the cause of death; yet in every one of these bodies I had the satisfaction of demonstrating, that morbid conditions had been evolved quite incompatible with the continuance of life.

From the London Medical and Surgical Journal.

#### ON THE EFFECTS OF CALOMEL IN PRODUCING SLIMY STOOLS IN CHILDREN. By CHIRURGUS.

It has often appeared to me that calomel is administered without much attention being paid to its effects, in the diseases of children. I am acquainted with some practitioners who rely almost wholly upon this remedy in most affections to which young children are liable. This practice appears highly objectionable, and likely to lead, in some cases, to fatal results. I shall state simply the effects which I have observed calomel produce on the alvine excretions, when administered in repeated doses, either alone, or in combination with jalap, scammony, or other cathartic medicines.

Children, until they arrive at the age of six or seven years, are very subject to attacks of disorder of the bowels, attended with green and slimy stools, and symptoms of general febrile affection. With the exception of the eruptive diseases, croup, and a few more inflammatory affections, green and slimy stools, accompanied with symptoms of general fever, may be said to form the most common characters of the diseases affecting children at this age. The colour and consistence of the alvine excretions, in these cases, are generally supposed to depend upon a superabundance of bile, or upon some morbid change in the quality of that fluid, and calomel is given with the view of correcting the action of the liver. Allowing, for the sake of argument, that the bile is secreted in too great a quantity, it does not appear to me that the principle upon which calomel is administered, with the view of changing the morbid excretions, is well founded. If it be, the principle upon which mercury is given when the bile is deficient, must be incorrect, for the same medicine cannot be supposed to produce effects so opposite. When the stools are of a clay colour, which is supposed to be owing to the secretion of bile being deficient, a few doses of mercury, in the shape of blue-pill or calomel, will generally change them to a colour approaching the natural. This is a proof that

mercury tends to increase the secretion of bile; but this being the case, upon what principle is it administered when the secretion is already too great?

I do not, however, believe, that the bile has much to do, in general, in producing the green and slimy stools in children. I have examined many bodies in which the lower part of the intestinal canal was found to contain a great quantity of green slimy matter, but where its contents were of the natural colour towards the upper part, I have also noticed the colour of the bile in the gall-bladder natural in bodies where the contents of the bowels were perfectly unhealthy in appearance. There does not, therefore, appear to be sufficient reason for attributing the green or dirty colour of the stools, observed almost invariably in the diseases of children, to a morbid alteration of the bile, or to a superabundance of it. If the bile were secreted in too great a quantity only, the stools ought to be of a darker yellow than usual, and not green.

But what I am desirous of showing is, that calomel is generally inadequate to convert the green stools of children to their natural colour. I have almost always found that, when calomel purges are given, the excretions continue of an unhealthy colour and consistence as long as the mercury is persisted in. I do not mean to say that this will always occur; but in the majority of cases it will be found that the stools become even more slimy than before, and, in some instances, they will present a greenish, flocculated appearance. I have witnessed these appearances kept up for several days, under the repeated use of the medicine.

Calomel purges are commonly given with view of clearing out these morbid excretions, and these are repeated daily, or sometimes oftener, under the supposition that, as long as any portion of the green substance remains behind, irritation of the bowels will be kept up, and a return to health prevented. This is an erroneous view, and I feel satisfied that the intestinal irritation, as well as the unhealthy appearance of the alvine excretions, is often kept up by such a practice; and that it sometimes leads to serious consequences, by increasing the general fever, and by producing so much nervous irritation as to bring on convulsions in some instances.

Is there any criterion by which the practitioner may judge when to stop? or ought the use of calomel to be dispensed with altogether in the common gastric complaints of children? I should say that, upon the whole, more harm than good results from the practice of giving mercury to young children, in simple gastric affections. I admit that, in acute inflammation, this remedy is the most valuable we possess, and that, in such cases, its effects on the bowels ought to be, in some measure, disregarded, as a more important disease requires to be subdued. But these are affections very different from those accidental attacks of general fever and disorder of the bowels, to which children otherwise healthy are subject.

By attending to the state of the alvine excretions, the practitioner may determine, in most instances, when the further use of mercury is likely to prove hurtful. I have much doubt whether, in cases such as I have mentioned, calomel purges have any superiority over other aperients. It may be asked, what is to be expected from this medicine more than from scammony, jalap, or rhubarb, when only a purge is required? But admitting that the intestines are more effectually cleared out when a few grains of calomel are combined with another aperient remedy, it appears to me quite unnecessary to repeat the mercury so often as practitioners are generally in the habit of doing. If we find the stools continue slimy and green, after two or three doses have been administered in succession, we may rest assured that the mercury will not bring about a change for the better in their appearance. The longer we persist in the use of it, the more unhealthy the motions will appear. I have seen these continue of a greenish, unhealthy colour for weeks, when it has been necessary to persist in the use of calomel in order to remove another complaint, or where it has been given with a view of correcting the alvine discharges.

It is well known that it is generally very difficult to affect the gums of children with mercury. When this is attempted, and when the medicine is administered in doses of a few grains two or three times a-day, for instance, for that purpose, the alvine excretions will always put on an unhealthy appearance. They will show various colours, from nearly black to light gray, and sometimes dirty brown, or approaching to clay colour; at other times they will be frothy, and presenting the appearance of yeast. The reason probably, that the mercury does not affect the gums, depends upon its passing off by the bowels, in combination with the large quantity of slimy mucus thrown out by the surface of the canal, under the use of the medicine. This slime lines the surface of the mucus membrane, and prevents the mercury from being taken up by the absorbents.

The remedy which I have found most effectual in correcting the quality of the green and slimy stools in children, consists of small doses of carbonate of soda, mixed with a grain or two of rhubarb. The rhubarb, perhaps, changes their colour by imparting its own to them, but the alteration produced by these medicines is not only in the colour of the motions, but also in their other qualities. They become more consistent and less slimy under their use; and children, who have suffered a good deal of gastric irritation from the calomel, show signs of being much relieved from pain, after a few doses of the soda have been taken.

From the London Medical Gazette.

#### EXTIRPATION OF THE LACHRYMAL GLAND.

A late number of a French journal contains an account of some cases of extirpation

of the lachrymal gland, by MM. Daviel and Guerin, performed many years ago, but which do not appear to have been published till now.

CASE I.—L. S. a peasant, 63 years of age, consulted M. Daviel, August 11, 1741. He stated that eleven years before he had received a blow on the upper part of the right orbit, for which fomentations and other remedies were employed; notwithstanding which the eye is represented as having projected from the orbit so as to produce considerable deformity, and to impede its functions, in which state it continued for eleven years. On careful examination M. Daviel discovered a fistulous opening, about a line in width, which penetrated the orbit. By introducing a stilette, an extremely hard body was felt between the globe of the eye and the bone, which was likewise discovered to be carious at the upper part of the orbit. The following operation was performed:—A director was introduced into the sinus, and an incision made with a bistoury moderately bent, extending from the small angle till within a line and a half of the great one. By this incision the ball of the eye was exposed, and the caries of the orbit seen, and several pieces of it removed. Nearly an ounce of grumous matter escaped, which had been contained in a strong cyst, and which, as well as the lachrymal gland, was removed. This last was nearly as large as a pigeon's egg. A small fatty tumour was also removed from the small angle; after which the eye was easily restored to its natural situation; and squinting, which had been present before the operation, disappeared. The wound was simply dressed, except that little dossils of charpie dipped in tincture of myrrh and aloes were applied to those points of bone which were exposed. In less than a month the patient was radically cured; the eye being as moist as the other, and capable of weeping, as if the lachrymal gland had been present.

CASE II.—Madle. C. G. aged 18, had suffered from considerable swelling at the upper part of the ball of both eyes for nearly a year. The eyelids appeared œdematous, and the conjunctiva injected: the left eye was much more affected than the other. The disease produced considerable pain, and much inconvenience. On the 1st August, 1745, the following operation was performed:—A vertical plait was made on the upper eyelid, which was divided along with the orbicular muscle and the membrane which attaches the eye to the orbit. A grooved director was then introduced into the incision, which was prolonged to the small angle of the eye by a curved bistoury. A fatty encysted tumour presented itself, in removing which it was found to be attached to the lachrymal gland. This was altered in structure, and was therefore extirpated. The same operation was performed on the left eye. Two points of suture were applied in each eyelid, and the patient entirely cured in ten days, the eyes being moist and capable of weeping, as in the former instance.

CASE III.—M. D. aged 50, consulted M. Daviel, 7th March, 1752, on account of a tumour which had appeared on both eyes about a year and a half before. The complaint had come on with great itching of the eyes, particularly the right, the upper lid of which had swelled immediately after he had been bled in the arm. A little tumour was perceived, which gradually increased, and pushed the eye towards the cheek: it seemed to penetrate deeply into the orbit, to the upper part of which, as well as to the ball of the eye, it was attached. The tumour was livid, loaded with varicose vessels; its surface unequal, and projecting nearly an inch from the orbit. The patient suffered from pain in the head, and vision was disturbed. He was seen by MM. Bonow, physician to the king of Poland, and Sue, professor of anatomy, who looked upon the case as very formidable; but M. Daviel, encouraged by his two former cases, gave a favourable prognosis, and performed an operation similar to those above described. A large quantity of fat was removed along with the lachrymal glands, which were scirrhus, and of the size of very large olives. The eyes returned into the orbits. General blood-letting, and various local remedies, were required, and the wounds twice opened to give vent to matter formed within them. In a fortnight the patient was cured, and the functions of the eyes restored as completely as in the preceding cases.

In a future number the cases of M. Guerin are promised.

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From the Edinburgh Medical and Surgical Journal.

THREE CASES IN WHICH THE ELBOW-JOINT WAS SUCCESSFULLY EXCISED, WITH SOME GENERAL OBSERVATIONS ON THE TREATMENT OF CARIES. By JAMES SYME, Esq. Surgeon, and Lecturer on Surgery in Edinburgh.

Though few surgeons now make the mistake which was so frequently committed not many years ago, by confounding caries with necrosis, the former of these diseases still remains in much obscurity and uncertainty, whether we regard its pathology or treatment. It is not my intention at present to write a treatise on this subject, but merely to notice some particulars concerning it which seem to me deserving of attention from practitioners.

Caries is generally seated in bones possessing a cellular or open texture, and when it occurs in those of the tabular or cylindrical kind, it is uniformly preceded by a morbid expansion of the compact structure into a state resembling that which naturally belongs to those where the disease usually resides. Every body knows that the shafts of bones, and especially the tibia, in consequence of chronic inflammation, are frequently enlarged, thickened, and at the same time loosened in their texture; which comes to have nearly the

same appearance as that of the spongy articulating extremities. In bones so altered caries occasionally occurs, or I should rather say a condition resembling caries, since it differs from this disease in one important feature, viz. *incorrigibleness*. I have hardly ever known this pseudo-caries resist the local application of blisters, and internal use of oxy-muriate of mercury; and I have felt very uncomfortable in seeing extensive incisions, rasping, trephining, and glowing choppers bristling with actual cauteries, employed ineffectually to cure complaints admitting of such easy remedy.

True examples of caries then may be said, without any exception, to occur always in spongy or cellular bone, and the appearance of the diseased portion is extremely uniform. Surgeons formerly described many different kinds of caries, the dry and the moist, the worm-eaten and the fleshy, &c. &c.; but this variety of description depended on a confusion of caries with other morbid states of the osseous tissue, which ought to have been, as they are now, very carefully distinguished. The carious bone, after maceration, looks as if it had been burned, being harder, whiter, and more brittle than usual, and there being always more or less excavation so as to expose the cellular structure, it greatly resembles a piece of loaf-sugar which has been partially dissolved by momentary immersion in hot water.

It is of much importance to recollect that caries seldom affects the bone to much depth. Thus we often see an articulating extremity carious over its whole external surface, and sound in the centre. At other times we find it hollowed out into a cavity, the surface of which is carious, while the external shell is sound. The very limited extent of the disease often contrasts remarkably with the extreme obstinacy and severity of its symptoms. Thus, there is in my possession a thigh-bone which I took from the body of a woman who had laboured under caries of the trochanter major for thirteen years; yet the whole disease may be covered by the point of a finger, and is not thicker than a sixpence.

Among the characters of caries, we find mentioned a fetid discoloured discharge; but any surgeon who trusts to such an indication would be greatly deceived, since, as far as I have seen, the matter can seldom be distinguished from that which does not proceed from bone, of what is usually called healthy pus.

Caries cannot, like necrosis, be induced directly by the effect of violence. It depends on a peculiar morbid action, which is probably in all cases preceded by inflammation. Many people think that pressure may induce the disease, but they do so erroneously. It is true that pressure, such as that of an aneurism, causes absorption of bone, and gives rise to an appearance which might be mistaken for caries by an inexperienced or careless observer, but could never for a moment impose upon any one acquainted with the distinctive

characters of the disease. The surface exposed by simple absorption differs in no respect from that which would have appeared if the excavation had been effected by violence. We do not here perceive the hardness, whiteness, and brittleness of caries, neither is there any matter secreted from it; and so soon as the caries is removed, the disease ceases. The effect of pressure in causing absorption without inducing caries, is well seen in those common cases of necrosis where internal exfoliation occurs, and the confined pus makes a way for its escape through the cylindrical walls of the bone, since the sides of these passages so produced, the cloacas, as they are called, are in no respect carious, or unfit for healthy action. Deep-seated collections of matter ought to be evacuated early to relieve the patient from pain, or prevent extension of the fluid, but no apprehension need be entertained of caries being produced by its pressure.

Inflammation, as already stated, most generally, if not always, precedes this morbid condition; but it is worthy of recollection that inflammation and even suppuration of bone are not necessarily followed by caries. In cases of compound fracture, amputation, excision of joints, &c. we every day see bones suppurate and granulate in the most satisfactory manner. We observe the same thing occasionally in joints which become ankylosed after being the seat of abscess. There can be no doubt, however, that suppuration of bone which either takes place spontaneously, or in consequence of slight external injury, is very frequently followed by caries, much more so than when it results from a wound which does not heal by the first intention; the reason of which difference probably is, that bone does not readily either inflame or suppurate, but from violence, except in bad constitutions, little able to carry on the process requisite for accomplishing a cure.

Generally speaking, caries occurs in persons of a habit naturally weak or unhealthy, or rendered so by improper modes of life, the suppression of some accustomed secretion, or any other circumstances destructive of the balance of action in the system.

Much perplexity has arisen from enumerating among the causes of caries, scurvy, gout, rheumatism, &c. If, instead of this, it had been said that caries is apt to happen in those disordered states of the constitution which give rise to the symptoms of scurvy, gout, or rheumatism, there would have been no difficulty in understanding the operation of these alleged causes.

The treatment of caries is preventive and remedial. The means of prevention are all those which tend to remove the constitutional defects that lead to the production of the disease, together with the use of those agents which counteract deep-seated inflammation, such as the various counter-irritants from the actual cautery downwards. The actual cautery, though now occasionally employed to destroy morbid structures and suppress he-

morrhage, has not hitherto, so far as I know, been used in this country to effect counter-irritation. I have used it rather extensively on the authority of Rust, who, in his treatise on "Arthro-kakologie oder Verrenkungen durch innere Bedingung," adduces the most decided facts in its favour, and I hope that so powerful a remedy will soon come into general use.

Though various external applications were formerly thought capable of altering the morbid action of carious bone, and so effecting a cure, I believe all well-informed practitioners now regard the disease as truly incorrigible, and remediable only by destruction of the part concerned. The question, therefore, comes to be, how can this be best accomplished? The means employed are caustics, cauteries, and excision. The first are little used owing to their inefficiency. The actual cautery is a more powerful remedy, and has many friends, but may, I think, be objected to on the grounds,—first, that in most cases it can hardly be applied to all the affected surface; secondly, that the extent of its operation is very limited.

Suppose we have to treat a carious joint, where the whole respective surfaces of articulation are diseased, how can the red-hot iron be applied over the whole? and unless it is applied over the whole, how can the disease be cured, since the cautery extends its effect to a very inconsiderable distance? But some may deny this last statement, and certainly with the appearance of reason; since any one would suppose, unless taught by experience to the contrary, that the glowing iron must affect the bone to which it is applied, far and wide from the part immediately concerned. About ten years ago, I saw a surgeon remove an eye, together with a large tumour, from the orbit of a boy aged 14, and then apply a succession of full-sized cauteries to the thin orbitary plate of the frontal bone. I expected, that, if the patient did not die from inflammation of the brain or its membranes, the whole thickness of the roof of the orbit must exfoliate. But neither of these events took place; and I found on dissection, some weeks subsequently, that the bone had been affected to a very slight depth. Having my attention called to this circumstance, I took every opportunity of observation, and ultimately satisfied myself, that the actual cautery affects a mere film of the bone to which it is applied.

The only other mode of destroying carious bone is excision, which I am convinced is by far the best, since more can be done by the gouge or cutting pliers in a few seconds, than by the actual cautery in as many weeks or months. In performing the operation, the surgeon ought to expose the bone very freely, and pursue his excision until he feels that he is cutting in sound bone. It is usual to apply the actual cautery after the diseased bone has been cut away; but this proceeding seems to me very objectionable. If any carious bone remains, the cautery, for reasons already men-

tioned, will hardly be able to destroy it. At least another scrape with the gouge would be ten times more effectual; and if it is all taken away, as it may and ought to be, what can be more preposterous than irritating anew a weak bone, thereby exposing it to the danger of a relapse?

When the large joints are carious, it is much better to remove the articulating extremities entire, instead of attempting to cut away the diseased surface piece-meal, which in most cases, indeed, would be impossible.

In performing the excision of joints, it ought to be remembered that caries does not affect the bone deeply; and, therefore, that while the surgeon ought most carefully to avoid leaving any of the diseased surface, he should give himself little concern as to the thickness of bone which he removes. I think it the more necessary to make this observation, from seeing that Mr. Crampton cut away four inches of the humerus, which I should certainly conceive was equally unnecessary and injurious. There is always much effusion of new bone for some distance, generally several inches round the carious portion, and the alteration of appearance thus induced is, I know, frequently mistaken for a morbid one. It is no more morbid than the callus which unites a fracture, and ought, therefore, to be carefully distinguished. As already stated, the surface presented by caries is excavated, rough, and spicular, such as would result from burning a cellular bone and then laying open its internal structure. The surface of effused bone, on the contrary, is convex and smooth; it looks as if the ossific matter had exuded in a fluid state and congealed into drops; so that while the carious part resembles a piece of sugar partially dissolved by water, the surrounding effusion of new bone has the appearance of sugar partially melted by heat.

The excision of joints is usually regarded as a fearful operation, difficult, painful, and dangerous; and, as I observed several years ago, in relating a case where the shoulder-joint was excised, it is not difficult to discover the source of this apprehension. The slightest wounds of healthy joints are known to be frequently productive of the greatest mischief, and hence the proposal to cut them out altogether seems equally rash and frightful. But it ought to be recollected, in the first place, that all the structure which excites so much disturbance by its inflammation, viz. the synovial apparatus, is removed when the joint is excised; and, secondly, that in cases requiring excision this structure does not exist, being destroyed by the previous disease. Carious joints, therefore, may be cut into with the same impunity as ordinary abscesses, and cut out with no more danger than what attends amputation, or rather not so much, since the balance of action will be less disturbed, *cæteris paribus*, when the limb is allowed to remain. As to the additional trouble and pain which unquestionably attend excision, they ought surely not to be grudged in consideration of saving a limb.

Of all joints those which may be excised with most ease to the surgeon and benefit to the patient are the shoulder and elbow. I have already published two cases of the former, and shall now relate three instances of the latter; trusting that their most satisfactory result will prove a step towards rendering excision a less unpopular operation, and thereby to the saving of many useful limbs.

CASE I.—Mr. Y. aged 24, about 14 months ago, began to perceive flying pains in the right elbow-joint. He could not in any way account for the origin of this complaint, and paid little attention to it, until after the lapse of several months it became gradually much aggravated, and accompanied by a weakness of the limb which at length deprived him of its use. The joint being now considerably swelled was leeches, but without any relief. Poultices were then applied for several weeks, when the practitioner in attendance made an incision over the inner tuberosity of the humerus, and evacuated a very large quantity of matter. Other incisions were made subsequently in different parts of the fore-arm for the same purpose. Though somewhat relieved after the discharge of these abscesses, he still continued to be tortured by deep-seated pain, which during the night was particularly severe, depriving him of rest, and almost distracting his reason.

I saw him first in the middle of last October, and found his strength, appetite, &c. less impaired than might have been expected. His countenance, however, betrayed intense and long-continued suffering, and exhibited very remarkably that peculiarly anxious look which so often accompanies disease of the bones. The limb was perfectly powerless, but could be made to undergo a distinct degree of motion without any perceptible crepitus; it was œdematous from the lower third of the humerus to the hand. Though fully satisfied that the joint must be diseased, I could not pass a probe through any of the sinuses which opened on both sides of the elbow, and in different parts of the fore-arm, so as to reach the bone. At last, after many trials, I discovered a very circuitous passage leading to the olecranon and posterior part of the humerus, which seemed to be excavated and carious.

As the disease appeared to be confined to the bones, as the patient was young, and as the irritation of the disease was much greater than what could result from any operation which had the effect of removing the source of disturbance, I resolved to excise the joint, and proceeded to do so on Monday the 3d of November.

Having placed the patient on a sofa, so as to present the elbow in a favourable position, I made a transverse incision at once into the joint, immediately above the olecranon, and extending quite to the radial tuberosity of the humerus, but at such distance from that on the ulnar side as to avoid the ulnar nerve. Introducing my finger by the free opening thus obtained, I found that all the bones en-

tering into the formation of the articulation was affected. I therefore cut upwards and downwards for about an inch and a half at each extremity of the first incision, so as to form two large square flaps, which being dissected from the subjacent bones, exposed them completely. Having ascertained that the ulna was carious as far as the coronoid process, I sawed it across at this part, and then insulating the extremity of the humerus, divided it in the same way immediately above the tuberosities. I lastly removed the head of the radius, which was very much diseased.

No vessel required ligature; but there was considerable general oozing from the cut surface. After exposing the wound for a few minutes, and sponging it with cold water, I brought the flaps together, and retained them in contact by means of a stitch in each of the perpendicular incisions, and three in the transverse one. Some pieces of lint and a roller were then applied, after which the patient was put to bed. The gentlemen present were much struck by the very slight alteration that appeared in the limb after the stitches were introduced.

On the following morning I found the patient had passed an indifferent night, and was looking rather anxious and exhausted by want of sleep, notwithstanding an opiate which he had taken the preceding evening; his pulse, however, was good, and he had had no rigour or other unpleasant symptom. As his bowels had not been evacuated the day before, I directed an injection to be administered without delay. In the evening he was in all respects well; a soft pulse, a clean tongue, and a countenance nearly free from the expression of anxious distress, which had so remarkably characterized it previous to the operation, led me to conclude that there was little reason for apprehension.

Great part of the wound healed by the first intention, leaving very little deformity, but the completion of a cure was delayed by an œdematous state of the limb, which distended the newly formed cicatrices, and impeded the healthy granulating contraction of those parts which did not unite in the first instance. To counteract this disposition I used fomentations with warm salt water and the pressure of a firmly applied flannel roller. I was much perplexed by a similar occurrence in the case of Christian Laing, whose shoulder-joint I excised four years ago, and remedied by similar means. In regard to this woman I may notice that she continues quite well, using her arm for all ordinary purposes, sewing, knitting, carrying, &c. so that no one could suspect from her appearance that there is any defect in the limb. Mr. Y. is now gradually gaining strength in his arm. He retains a great extent of motion, which is effected without any uneasiness. He is able already to write, and will soon, I have no doubt, recover nearly the entire use of it.

CASE II.—A. L. aged 8, in February last fell upon his left elbow while playing with some other boys. The joint soon afterwards

became enlarged, stiff, and painful, but not so much so as to excite alarm until the month of April, when his mother brought him to me for advice. I then found the appearances very unfavourable; the limb being straight and nearly immoveable, with much swelling of the elbow. The usual measures were employed, but did not prevent the formation of an abscess, which pointed on the outer side of the elbow between the radius and olecranon. I evacuated the matter by incision, and advised that the patient should be taken to the country, as his health had suffered considerably. About the middle of August he returned to town much improved in all respects, his general health being quite restored, and the joint being much more moveable as well as diminished in size. Matters continued in pretty much the same state until October, when, finding that the sinus did not heal, I introduced a probe, and ascertained that the olecranon was carious. Having explained the obstinate nature of the complaint, which rendered a spontaneous cure hardly or rather not at all possible, and the necessity of amputation at some future period almost certain, I readily obtained permission to do what was required for the patient's relief.

On the 20th of October, I exposed the olecranon, and by means of cutting pliers removed a great part of the shell into which it had been expanded. This enabled me to extract some loose pieces which lay within the cavity. And, hoping that these might have occasioned the obstinacy of the complaint, I prosecuted the excision no farther, and dressed the wound with dry caddis.

The patient made no complaint whatever after the operation. He could not be confined to bed after the first day, and was with difficulty persuaded even to remain at home. The wound assumed a very healthy appearance, and soon contracted to its former size, but there it remained, and the probe discovered that there was still some diseased bone.

Perceiving that another operation was required, I determined to make it an effectual one; and proceeded to do so on the 27th of November. I made a crucial incision, like a St. Andrew's cross, so as to obtain four flaps, which being reflected, I divided the ulna below its coronoid process with the cutting pliers, and then removed the detached portion, though not without some difficulty, owing to its connexion with the *brachiaeus internus*. I next examined the radius, and finding the centre of the round articular surface carious, cut off its head. I then directed my attention to the humerus, and finding an unsound part in the trochlear hollow, cut off the whole articulating surface. Having thus finished the operation, I brought the edges of the wound together by means of four or five stitches. There was little bleeding, and no occasion for any ligatures.

There was little constitutional disturbance, but the wound did not unite in any part by the first intention. There was some sloughing of the unhealthy soft parts, and very pro-

fuse suppuration, which in the course of a few days diminished to the proportion of a healthy sore. The patient was running about as usual by the end of the first week, and on the day three weeks from the operation, I showed him to my class with the wound all but healed. I did so to impress them with the fact, that recovery after excision is not nearly so tedious as it has been represented. The mobility of the limb as to rotation, flexion, and extension, remains; he is already able to lift weights with it, and will ultimately, I expect, find little difference between it and the right one.

CASE III.—Ossory Fitzpatrick, aged 41, a ship-carpenter of Liverpool. Somewhat more than a year ago began to observe occasional wandering pain in the left elbow, together with some stiffness of the joint, but was not rendered unable to use the limb until between two and three months ago, when the swelling and pain became excessive, with violent disturbance of the whole system. The fever subsided, but the joint remained swollen still and very painful. An abscess was opened by the knife, and other apertures appeared spontaneously, which did not heal. In this state he applied to me on the 1st of January. On introducing the probe through more than one of the openings which have been mentioned, I readily passed it through the joint, grating against carious bones. I proposed excision, and meeting with the patient's ready consent, performed it on Sunday the 3d.

Having placed the patient on a table with his face downwards, so as to present the elbow conveniently, I made two square flaps as in the first case. Finding that the ulna was diseased quite down to the coronoid process, I sawed off the olecranon merely, and then cut away with the pliers whatever other parts required removal; by which mode of procedure, the obstacle afforded by the attachment of the *brachiaeus internus*, which proved so troublesome in the second case, was avoided. I then detached the head of the radius, which was completely carious over its whole articular surface, and removed the extremity of the humerus with the saw; but finding that the disease did not seem to be eradicated at the ulnar tuberosity, I cut away both it and the radial one, so as to leave no room for anxiety or doubt. No ligatures being required, I inserted five or six stitches, so as to keep the cut edges in contact; then applied some folds of caddis, and lastly, supported the limb by means of a roller.

This operation was much more difficult than either of the former, owing to the very firm connexions of the bones. It occupied, with the dressing, &c. a quarter of an hour.

The wound healed entirely by the first intention, excepting a space not larger than one of the original sinuses, and the patient suffered no constitutional disturbance. In two or three days he was walking about, and by the end of a fortnight the cure might be considered complete. The motion of the joint, in flexion, extension, and rotation, is

not at all impaired, and there is not the slightest deformity.

The ulnar nerve was not injured either in this or the other cases, though, instead of exposing and holding it aside, as has been advised, in order to avoid the error of Moreau, who cut it across, I trusted merely to my knowledge of its situation.

I should have been happy, had it been in my power, to state along with these cases, the condition of the limbs as to strength, mobility, &c. after the complete recovery and exercise of several years; but I think it would have been wrong to delay their publication so long for this purpose. I am anxious to prevent the unnecessary sacrifice of any more arms. I have amputated when excision was practicable, and when I wished to have performed it, but being less able to bear responsibility than at present, was prevented from doing so by the want of authority, since no practitioner would sanction an operation which had not any precedent in Great Britain. The almost forgotten operations of Moreau will now again perhaps be reconsidered, and the recent case of Mr. Crampton, together with those now submitted to the public, will, I hope, make such a deep impression on the profession, as may induce its practitioners to pause before they mutilate a fellow-creature by amputating his arm for disease or injury of the elbow-joint.

From the London Medical Gazette.

**SOME OBSERVATIONS ON THE TREATMENT OF SMALL-POX, BY PUNCTURING THE PUSTULES.** By ALEXANDER STEWART, Assistant Surgeon,—2d Dragoons.

Amongst the various lights that are daily thrown upon medical science, few perhaps have been more permanent or successful than vaccination on small-pox. It is true, various circumstances may have occurred partially to obscure it when, without any known cause, (except idiosyncrasy) it has not prevented the subsequent attack, nor fatal effects of small-pox. Besides, there are prejudices amongst many people, of different grades in society, which prevent them from flying to this almost certain preventive—whether they choose “to leave it to Providence” or prefer variolous inoculation. Under these circumstances, I feel called on to lay before you a method I have successfully made use of, and which has also been practised with equal success by others to whom I have pointed it out. Whilst the pustule is yet lymphic, (I would almost say papular) and before much, or any ulceration and suppuration have taken place, a needle is to be passed through it, as near the base as possible, while the surgeon, having a small bit of dry lint in the other hand, is to press the apex gently on the base, and there retain it about a minute or two. This is to be done to all separately, and individually, as they appear. The effect on each is various

—in some, an almost immediate cohesion will take place between the apex and the base, and a small superficial scab will be the consequence; the ulcerative action merges into adhesion, the red basis gradually subsides, and when in a few days this superficial scab falls off, the part is healed without pitting;—in others, the little pustule will again fill; if so, it is to be punctured and pressed down: the apex and base may then unite by the first intention, or it may again require the operation a third time, to accomplish the object; but seldom have I in any case known it require more. The constitutional treatment must of course be adapted to the circumstances of the case, as if this mechanical and local one had not been made use of. It may be objected that it is laborious going over each pustule, when a full crop has covered the surface, but we cannot have any thing without trouble, and maternal solicitude will not find it irksome. At first the motion requisite will greatly disturb the child and distress the parent, and perhaps render her unwilling to pursue the task, but the evident relief so shortly produced will raise her hopes, and reconcile her to the process. When confluence is apprehended, and two or more pustules are so close that their inflamed bases are united, let each be punctured separately as far as possible from the other at the same time, and let the surgeon press between them with lint,—a separate bit for each pustule. The contained lymph is absorbed from each as it is pressed out, the adhesion of the apex and base is separately produced, and confluence is prevented. This method is invaluable to females, as little if any pitting is to be found after the part is healed. I am not aware of this treatment having been recommended:—pustules, vesicles, and papulæ, have been broken down in all the stages of the disease, but it would appear to me, more to obtain fluid for experiment, or to see the nature of the contained fluid, than for a curative purpose, no pressure being used, nor the above mode of practice proposed. The idea suggested itself to me, when in the country, on the 21st November, 1827, in consequence of a man requesting me to attend his son, a fine boy about three years old, then covered thickly with the eruption. Being aware that puncturing after maturation is sometimes recommended, with a view to prevent the absorption of pus, and also considering that ulcerative inflammation is the principal cause of the after pitting on the surface, it appeared to me that by early puncturing, and bringing the parts together before maturation, and while under a comparatively simple inflammatory excitement, a new and healthy action might be produced, and the specific tendency to suppuration and its consequences destroyed:—the event justified this opinion. Mr. John Hunter has demonstrated by dissection, that a slough exists in the cutis in small-pox, answering to the size of the pock, and which he considers peculiar to this disease. Others believe this slough to be the cause of pitting, and as being attendant on

each pustule that goes through its course of suppuration and pitting. We must hence be led to infer, that if the inflammatory excitement producing this slough be early employed in producing adhesion, the formation of the slough, and consequently future suppuration and ulceration, will be prevented. But Mr. Hunter seems to consider that the formation of the slough is not so much the effect of intensity and degree as the peculiar kind of inflammation. In reply we must observe, that peculiarity of inflammation is a thing we know little about, except from its tendency and effects:—that if a healthy inflammation be produced where an unhealthy one existed, then the existence of that peculiarity of action becomes of little consequence. The practice mentioned in this paper I have recommended in other cases, not only of small-pox but of severe varicella, and found it successful. I now beg leave to lay it before the profession, most of whom in civil life will have better opportunities of meeting with the disease, and judging of the merits of the practice, than military medical men, the vaccine system being too rigidly enforced to meet often with this formidable disease in the army. Whether the disease, thus destroyed in its infancy, can have the effect of preventing its recurrence in after life, must be as yet only matter of speculation, but it would appear to be of no consequence, for the treatment that once could so easily check the disorder is always at hand to remove it.

From the London Medical and Physical Journal.

#### CASES OF BURNS TREATED BY THE APPLICATION OF FLOUR. By J. MARSHALL, Esq. Surgeon.

The minutes of the following case of a severe and extensive burn, with two slighter ones, may probably be deemed worthy of publicity through the medium of the London Medical Journal, with a view to exemplify the practical effects of a simple but highly efficacious remedy. Previously to entering upon a detail of the symptoms, it is deemed expedient to make a few cursory physiological and practical observations, on the *modus curandi* of this remedy.

This mild substance is doubtless pre-eminent to all others hitherto in use, by imparting immediate ease to the inflamed and irritable surface; it rapidly heals by the scabbing process, in uniting with the discharge from the abraded cutis; and almost instantaneously forms a temporary semi-transparent covering, thereby assisting the natural functions in restoring the epidermis. The advantage becomes evident by stopping a profuse discharge, and the tedious progress of ulceration. That remarkable substance, the animal gluten, peculiarly contained in wheat, seems in this instance to assist the rapid regeneration of the scarfskin, and thus protects the cutis and rete mucosum. The surface of the body being

wonderfully supplied by the extension of the cutaneous nerves in the form of a soft pulpy membrane, somewhat resembling the expansion of the optic nerve on the retina, readily affords, it is presumed, an explanation of the great violence offered to the system in all cases of extensive burn or scald.

This topical remedy is equally suitable to either of these accidents, and perhaps eventually will be found useful in many other cutaneous affections. It has been recently tried by me in the case of an infant three months old, who laboured under an inflammation, attended with ulceration, pouring forth an ichorous discharge: the parts affected were the lips and chin, the right groin, the scrotum, the inside of the right thigh and leg down to the toes. The result was most satisfactory: some parts healed in a few hours, and the whole surface in three or four days. The thickened state of the scrotum, although unavoidably exposed to the frequent irritation of urine, also yielded.

When the flour has formed the artificial covering, the further application becomes comparatively superfluous; which is perceived by its rolling off. This circumstance may be demonstrated by the following example, which equally applies to the manner in which all the other ulcers were healed. The external surface of the nose, from the destruction of the scarfskin, was ulcerated: in the evening it had ceased to discharge, and was apparently healed; the swelling had likewise subsided, and the part assumed its proper size and form: the flour became unnecessary, no longer resting on its surface. This ulcer was particularly regarded, under an impression that the skin of the face, from its peculiar structure, is susceptible of a greater degree of irritability than other parts.

In the lady's case, when the cuticle was completely renovated in some places, though not generally, it imparted a very peculiar feel to the touch, by resembling the dryness and smoothness of parchment: the whole covering of the biceps muscle of the right arm was thus circumstanced. Probably this may be ascribed to the advanced age and previously emaciated state of the patient. This new healed part was of a dark livid purple, which occurred in many other places, accompanied with a similar sensation.

Mr. B. scalded the back of his hand and fingers with steam: he consulted me four days afterwards. The parts were inflamed and swollen, with three blisters going into a state of suppuration. By applying the flour every hour, in less than two days the swelling, inflammation, and ulceration, were completely cured, although the patient had been many years in the habit of indulging freely in ardent spirits. On extending the hand, the back was corrugated, and the cuticle rather stiff and polished.

A boy scalded the left ankle-joint and upper part of the foot. He had applied Goulard's lotion the first two days; and afterwards a dressing, spread on lint, of red precipitate

rubbed down with yellow basilicon. Five days after the accident I saw the patient: the part was highly inflamed, and nearly covered with blisters, which had been injudiciously opened, in a state of rapidly spreading ulceration, with a purulent discharge. He could neither use the joint nor bend the toes, being stiff from painful distention. The stimulating dressing was carefully wiped off, where practicable, and the flour substituted. The youth expressed immediate relief. He was directed to apply it every hour during the day, and as often as he awoke in the night, and, wherever the discharge issued through the layer, to apply the flour more assiduously.

Second day.—The patient had passed a good night. Swelling nearly subsided; the surrounding inflammation gone; the ulcers mostly healed; one of them still contained a portion of fluid, and another, near the inner ankle, gave out a discharge of matter. He moved the toes and ankle joint freely. The change was very remarkable.

Third day.—The fluctuating matter that appeared on the preceding day was wholly absorbed. Patient free from pain. The ulcer near the inner ankle gave off a trifling discharge. On removing from the surface the coat of flour to inspect the character of the granulation, it was found in a most healthy and healing condition. The frightful aspect of a general, ill-conditioned, and irritable ulcer, which threatened mischief on the first view, was effectually removed.

Fourth day.—The surface of the part affected was washed with tepid water, in order to obtain a full view of its state. The whole was healed, except in two small places, not so large as a horsebean, which were in a healthy healing condition. The new skin was of a red hue, and shining.

Mrs. H., a lady in her eighty-fifth year, possessing a good constitution, but greatly emaciated by age, accidentally set fire to her clothes. Her face was much swollen; the hair, eyebrows, and lashes destroyed. It was impossible to recognise her features. The closed and thickened eyelids were opened with difficulty. The other parts injured were the neck, chest, ribs, the back (exceeding half its length,) the arms, from the shoulders to the finger ends. The cuticle was raised into numerous blisters, the size of walnuts, on the swollen fingers, palms, and backs of the hands; the epidermis loosely hanging in flakes or tatters on the back, arms, and ribs. This extensive surface, coloured by various hues of red, yellow, and purple, discharged a profuse ichorous and purulent matter. Skin hot; quick, irritable pulse; white tongue, great thirst, and incessant moaning, arising from her sufferings, accompanied by the most afflicting state of mental anxiety.

It is to be regretted that this state of disease was permitted to remain unassisted full twelve hours. On the free application of the flour to the whole surface, the patient ceased to moan, the spirits revived, and she expressed the greatest relief. The flour was applied

every hour, but more frequently wherever an oozing of discharge appeared.

In the evening, the skin was cool; pulse steady, eighty-two; the countenance restored to its natural appearance; injured parts looking much better; the discharge generally reduced; bowels had been relieved by an aperient; tongue moist and clean.

On the following morning, (second day,) the patient was cheerful; had slept four hours during the night; had partaken freely of diluents; tongue clean; pulse seventy-eight, skin temperate.

In the evening, no alteration, but the surface more generally healed, and the discharge almost wholly subsided. From so decided an improvement, and the absence of symptomatic fever, hopes were entertained of recovery.

On the morning of the third day, the lady had passed a tranquil night, with intervals of sleep; the tongue had a brown tinge, but moist. Hitherto a febrifuge draught had been taken occasionally; a tonic was now substituted, with *infus. rosæ et spiritus ætheris nitrosi*, and a gentle laxative.

In the evening, the pulse 100; tongue darker brown; skin hot and dry; respiration hurried. Ordered *inf. rosæ cum sulph. quina*.

The fourth day.—The bowels open. She had passed a restless night, with muttering delirium; *subsultus tendinum*; pulse 110, skin hot. These symptoms increased towards night.

On the fifth day, the tongue was black and parched; sordes on the lips; great difficulty of deglutition, speechless and convulsed.

She died about five o'clock the following morning.

As the local affection was so happily relieved, and the symptomatic fever for a time suspended, the immediate cause of death must be attributed to the violent shock the system had sustained, together with extreme old age. The case, however, forcibly illustrates the healing effects of flour. The ease with which it is directed by the dredger, and re-applied, without handling or disturbing the parts affected, may suffice to demonstrate, with the foregoing cases and observations, the superiority it possesses over all former dressings. By checking the progress of severe ulceration, it will effectually prevent the frightful scar, the wry neck, contracted limb, and destruction of parts by sloughing.

From the Medico-Chirurgical Review.

AN ESSAY ON REMITTENT AND INTERMITTENT DISEASES, *including Marsh Fever, Neuralgia, &c. &c.* By JOHN MACCULLOCH, M.D., F.R.S., &c.

[Art. IV. (and last) TREATMENT OF NEURALGIA.]

We are now enabled to complete our analytical review of Dr. Macculloch's interesting and valuable volumes—and we do not regret or apologise for the great space which we have occupied in this analysis. We are convinced

that we have, through this medium, disseminated more original and important matter, and that to a greater extent, than has ever before been done through the vehicle of a review. We are confirmed in this opinion by the numerous applications which we have, from time to time, received, soliciting a further prosecution of the analytical delineation of our author's volumes. We now hasten to put the finishing hand to our task.

CHAP. X.—RHEUMATISM OF THE EYE—OR, NEURALGIA OPHTHALMICA.

Dr. M. assures us that the doctrine of the malarious nature of neuralgic ophthalmia was entertained by him a great number of years ago—and has since been annually confirmed by extensive personal observation. Dr. M. remarks that, whenever medical practitioners shall pay minute attention to the distinction between this disease and common ophthalmia, they will find plenty of examples. The loss of sight is not an uncommon consequence of want of discrimination in such cases.

"In some places, this ophthalmia is arranged by Sauvages with his *Migraine* or *Hemicrania*, under the term '*migraine des yeux*,' and in others under other titles: proving his want of correct notions respecting it: while Cullen does not take the slightest notice of it in his very meagre and superficial description of the general disorder. The former remarks that it produces inflammation in the globe of the eye, terminating in a confusion of the humours and in suppuration; unaware apparently of the milder cases, yet, in another place, noticing its tendency to return in the second eye after destroying the first. In St. Yves and Maître Jean, some cases of it are described by the term *amaurosis*; that expression apparently meaning the destruction of the humours: while it is remarked that it endures for months or years, that it is attended by fever, hemicrania or *clavus*, want of sleep, and giddiness, and that it attacks one eye after the other: while the former oculist, adopting the usual resource which ignorance has resorted to in so many more of these disorders, proposes to prevent this second attack by extirpating the first eye. I did not say too much when I said that had the surgical sect believed the sciatica to be Neuralgia, and dared to extirpate the sciatic nerve, they would equally have had recourse to their panacea, the knife.

"Among many casual notices of this peculiar ophthalmia, and unsatisfactory as casual, I must however distinguish the essay of Wardrop; the first, I believe, through which the attention of physicians was fairly called to it. To praise that essay for the accuracy of its description of a much neglected disease, is but to agree with all who have read it: yet I should be negligent of my duty did I not remark, that however perfectly my able friend has seen and discriminated this variety, his account is limited to the severer cases, and that he has not appeared to be aware, in his essay, whatever may be the case otherwise, either of the slighter and less marked, or even

of the chronic varieties, or of the extreme prevalence of this peculiar species; and that, in consequence, there is almost as much error prevailing, in practice, respecting it, even under the name which he has adopted, by those who have had the advantage of his experience, as there was before. Thus also I perceive no notice of its properly intermittent and alternating characters; while with respect to other portions of the description, such as the general fever, the bilious symptoms, the decided neuralgic and periodical pain, to which I may also add the utility of bark, I should desire no other evidence to prove that it demands the term which I desire to apply to it, and that it is in reality a mode of Neuralgia. I shall however be able to produce much further evidence of its connexion both with that disease and with intermittent: and if I were inclined to express any surprise that so acute and experienced an observer had not formed the conclusion to the very verge of which he has approached, I should suppress that by recollecting, that in this as in every other disease which I have here described under this leading character, the foundation and cause of all the error must be sought in the want of a correct and broad view of the fundamental disease itself: Neuralgia." 252.

Dr. M. acknowledges that, on farther research, he has found notices of the connexion between ophthalmia and intermittent, in the writings of Morton, Strack, and Monfalcon—the latter remarking that this kind of inflammation is very common in the malarious districts of France, and is very apt to terminate in opacities. Like all the neuralgic diseases, this one sometimes occurs under a periodical character—at others, it is irregular. But the same may be said of rheumatism of the face, of which it is a near relative.

"It is observed, and perhaps very commonly with truth, that this ophthalmia is produced by exposure to cold winds, very often by partial cold, and very particularly, as it is thought, by a sudden impulse of the east wind on the eye, or face. The popular term in this case is, a '*blight*;' while as it is not unusual for the east wind to be especially attended by dust, this is often esteemed the exciting cause, and is as often vainly sought after; the patient being misled by the well-known sensation which follows the enlargement of the small vessels.

"Now, so far from this view of the cause being averse to the opinion of its belonging to the class of intermittent and neuralgic disorders, cold so applied is precisely one of the causes which produces these also, just as it excites the rheumatism of the face; adding a proof, such as it may be thought, respecting the true nature of that disease as well as of the ophthalmia in question. An average of cases will show that the rheumatic ophthalmia is much more common in spring and during east winds than at any other time, and the very vulgar themselves are indeed convinced of this as to ophthalmia generally: while it will I believe be found, that nine cases of ten, or indeed far more, if not even all of the ophthal-

mias thus occurring, are this very disease. And I formerly showed, while I have attempted to explain the cause, that such east winds, at that season of the year, do produce intermittents as well as Neuralgia; and that as far as cause is concerned, the whole of these disorders unite under one general head, instead of being separated by differences of cause: while it is still easy to see how the local action of cold on the eye or face, might determine the local disease especially; the wind thus acting by a double power." 256.

The above reasoning is equally ingenious and just—and it will be found, on accurate observation, that this disease abounds most in those seasons or years in which marsh fever rages most. It is completely proved by the geographical bearings of this ophthalmia, that malaria is at least its principal cause. It is endemic on all coasts of the Mediterranean where fevers prevail, occurring very remarkably, at the same season, or in the pestilential months of summer and autumn. It prevails along the marshy coasts of Barbary, during four months of the year—while at Tripoli few escape it. It is common at Rome, Naples, and other parts of Italy, where malaria is acknowledged to be predominant. In Spain, this ophthalmia is extremely prevalent on the maritime coasts that are subject to fever—especially at Valencia, Albaterra, and Clivillente. The following is the graphic description of the disease itself, as drawn up by our very intelligent author.

"There is a peculiarity in the aspect of the inflammation itself, far easier to recognise than to describe, and by which alone it is generally distinguishable, even at a distance, and on a mere glance, to those who have acquired that experience which in other cases is called the *tactus eruditus*. I have sought in vain for expressions to say fully what this is; but I believe it to be as useless as difficult, since, however accurate they might appear to those who already know this inflammation by sight, they would not teach others to know it, inasmuch as no visible object can be justly described to the previously ignorant; while such a description would be useless to those who are already experienced in this ophthalmia. The more obvious character, however, is a dull, rather than a lively red colour, not unfrequently attended by a tinge of yellow; the cause of which is especially visible in the sound eye when but one is inflamed, and the source of which must now also be obvious, particularly in autumnal cases. This inflammation occupies the whole conjunctiva, even to the verge of the cornea; and while the redness is rather produced by the minutest branches of the arteries than the larger ones, the general aspect is almost that of an additional coat of red cloth in the severer cases, sometimes attaining a higher level than that of the cornea.

"In severity, however, it differs exceedingly, from a mere general, and somewhat pale, redness of the conjunctiva, to that violent inflammation just noticed. Here, it is apt to

resemble the celebrated contagious and purulent ophthalmia; but it can nevertheless be distinguished by attending to its progress and to the collateral symptoms, while it never, as far as I know it, suppurates on the surface, like that disease. This is a part of its history however on which I must yet speak with some hesitation; as, after many years of observation, whence I concluded that it never did suppurate, my opinions have been recently shaken by one or two cases, though I had not the opportunity that was necessary for satisfying myself as to the real nature of the disease in these. Whenever it shall, as a separate disease, have received from physicians the further attention which it requires, this, and some other circumstances which I cannot now well elucidate, will be better understood; while I shall gladly avail myself of such information; though it will be necessary that this disorder shall be truly discriminated for this purpose, lest we return into worse confusion than that which I am attempting to rectify." 261.

Such is the general and obvious character; but there are one or two remarkable circumstances that yet deserve remark. It is often unattended by any pain in the eye itself—especially where it is of long standing and not very severe. There are cases, however, where the pain and irritation are as great as in purulent ophthalmia. This is a peculiarly obstinate and untractable disease—lasting, for months, as a mere deformity, and with little suffering, resisting every means of relief—and being generally aggravated by depletive measures.

Mr. Wardrop has remarked a peculiar sense of dryness in the eye at the commencement—followed ultimately by a copious lachrymation. The latter symptom Dr. M. can confirm by ample observation. He cannot so speak of the first.

"When there is no pain in the ball of the eye, it would seem that the conjunctiva alone is affected; while, when irritability to light attends, we must suppose that the neighbouring vessels, and nerves, within the eye, are in that state, be it from sympathy or extension, which so often occurs in the rheumatism of the face, and in common Neuralgia, where, added to the decided inflammation and pain, there is an excitement, a tenderness, or an irritability in the adjoining parts. It is not necessary that the eyelids should be affected, or that the inflammation of the conjunctiva of the eye should extend over that of the eyelid; though this happens in the severer cases, and, as it would seem, rather in the acute than the chronic ones. It is a fortunate circumstance, that this inflammation is so much and so often resisted by the transparent cornea, as is the fact also in some other ophthalmias; but abundant instances of this do nevertheless occur. Rigidly speaking, and in the severe cases, the cornea becomes dull; and if this opacity proceeds, it at length forms a cloud or a spot which diffuses itself over the whole eye, while it is more condensed in the centre. Fortunately, even when very considerable, this commonly

disappears, under proper treatment of the general disease, and even within a day or two; while I have seen it return many times, under different relapses and in successive seasons, without any more permanent effects. In such cases also, it will sometimes be found, by means of a lens, that there is an ulterior disorder of the cornea, resembling very superficial ulceration; equally disappearing, and without bad consequences, with the general inflammation. Far more rarely does it affect the iris; but cases even happen, as I shall soon show, where that membrane alone is the seat of the disease; the neuralgic affection producing here a rheumatism of the iris; to adopt the common phraseology." 264.

The neuralgic ophthalmia sometimes attacks suddenly, and arrives at its full degree of intensity in a few hours;—but it is often preceded by an intermittent or remittent febrile state, which, however, is too generally overlooked. Some symptoms of this kind will almost always be detected *during* the attack, a fact which we can substantiate by personal observation. Sometimes this ophthalmia is the sequela of a neuralgic pain in the face, as in the eye-brow, temple, or lower jaw—or even in remote parts of the body. All these circumstances mark distinctly its connexion with intermittent and neuralgic affections generally. Great modifications will be produced in the characters of this complaint, according as it is in an acute or a chronic form. The following circumstances will, however, be detected by all careful observers.

"A watchful physician will rarely fail to perceive that physiognomical mark of a cold stage at some period of the day, which I have so often pointed out; as the fever of this disorder is generally, but not invariably, a quotidian; while in many cases, that stage, and even a hot fit also, are distinctly marked. This is true even of the slightest varieties and of the most chronic or most habitual and repeated ones: while in the severer acute disease, the fever is strongly marked as a remitting, or even as a continuous one; as continuous at least as in simple remittent; though, under types more distant than quotidian, I have met few of a severe character; those of a tertian form which have occurred to me having been most commonly mild, or else chronic cases.

"Such a febrile state is often, as usual, paroxysmal while the inflammation is permanent; but this is no cause for surprise, as the same happens in the rheumatism of the face, in that of the intercostal muscles, and in other analogous affections, and also not unfrequently in the purer Neuralgia, as in sciatica. Supposing this febrile state to be present or not, or to be more or less distinct, there is frequently a separate neuralgic pain accompanying the inflammation, throughout the disease, or occasionally, for some days only; being the hemi-crania, or the pain in the temple, or in the eyebrow, which I formerly noticed as sometimes preceding the attack; and being sometimes an extremely severe Neuralgia. This is the symptom which forms that criterion for

the disease which ought never to be mistaken, though in reality rarely attended to; and it is so marked and so discriminating, that to pass it without notice, or, when present, to treat the disease as common ophthalmia, is unpardonable in even the most mechanical practitioner." 269.

In the greater number of cases, only one eye is affected, though sometimes both may be the seat of the complaint—at least in succession or alternately. This is a highly discriminating feature in the complaint, and should always excite suspicion as to the nature of the ophthalmia. Another remarkable peculiarity is the disposition to migration or metastasis. When this occurs, the original inflammation, however severe, sometimes disappears entirely—even within a few hours, so that its former existence could scarcely be suspected—the new one attaining to its almost violence in a time as short—often to disappear in its turn. Our author naturally expresses his surprise that so extraordinary a fact as this should not have, long ago, attracted suspicion, since nothing analogous to it occurs in other diseases, with the exception of gout. Like other neuralgia and intermittents, it may be limited to one attack—or, having occurred once, it may be liable to relapse repeatedly. Like all other diseases, it often disappears spontaneously, while the remedies gain a credit to which they are not entitled.

"As to the theory of neuralgic ophthalmia, if it is not very evident, it is at least as intelligible as that of any other form of neuralgic inflammation. Of the true, the ultimate theory, of any inflammation, we know absolutely nothing; since, after all that has been written on this subject, we have but so many words; one term substituted for another. If all that we can know as yet of the cause of neuralgic inflammation is no better, it is at least not worse; while we are in no want of analogies, or the difficulty, such as it is, is countenanced by parallel difficulties." 273.

The author next proceeds to the narrative of two or three cases—because such narratives often excite an attention that would otherwise be commanded by the most labour-ed general description.

"In the first case that I shall notice, which was not under my own care, but under that of a medical friend particularly interested in the result, the original disorder or attack was a periodical and daily rheumatism in the neck, remarkably well defined. After this had lasted a week, there occurred suddenly a pain in the eye, with inflammation of a very violent character. I entertain no doubt that the intermittent form remained either in the febrile symptoms or in the pain about the eye: the violence and acuteness of this being a very discriminating mark, as it does not happen in any other ophthalmia. But as this physician had never considered the rheumatism in question as a disorder belonging to intermittent or Neuralgia, he had paid no attention to the symptoms, and was therefore unable to describe the case more minutely. Far less had he ever

considered any ophthalmia to be a disease of this nature; and the patient was therefore treated in the usual manner, with the unfortunate termination in blindness, from the formation of a pustule in the cornea. I have given this case as I received it from the physician himself, so that others may judge; while the suddenness and violence of the attack of inflammation, the accompanying severe pain, and the previous periodical rheumatism, leave no doubt in my own mind respecting the nature of the disease." 275.

In the following case our author attended with a most learned and talented physician—not a routine practitioner, and who was yet misled—showing the necessity for a new investigation of this class of complaints.

Case 2. "In this instance, and where the personal interest was as great, the patient was suddenly attacked in the evening with an inflammation of one eye, which ceased by the following morning. On the next evening, there was no inflammation; but it returned on the alternate one, and in the other eye, terminating similarly on the following morning. As I chanced to reside in the house, I could perceive and point out the tertian cold stage; this being evidently a tertian intermittent, or rather, that disorder doubled, (not double tertian,) inasmuch as the succeeding fits were different. Nothing was done; and as it was wished to watch the natural progress of the disorder, which, after lasting thus about ten days, or displaying six different alternations of this nature, became a decided double tertian; the inflammation returning every evening in the alternate eyes, to terminate in the morning. And in this instance, the neuralgic intermittent pain occurred in each eyebrow alternately, accompanying the inflammation; so as to produce a case as strongly marked as is easily conceived. I shall only add that it was afterwards cured by bark; but that I did not even then succeed in producing a free assent to opinions which, probably, I might even now have kept to myself, for all the impression they are likely to make for these twenty years to come; when those who have been most active in opposition, will be among the first to recollect that all this was long ago their own opinions." 280.

Case 3. In the last case which our author notices, the patient had been for some time afflicted with a general or diffused periodical rheumatism, followed at length by inflammation of both eyes, the original disease continuing. The disease was of such long standing that a cure was hopeless. Both pupils were so contracted that a pin could with difficulty have passed through one, the other being absolutely closed.

"By the patient's account, he had been seized with occasional fits of blindness during the progress of the disease, arising doubtless from the contraction of the pupil, while I have as little doubt that the iris was affected by the neuralgic inflammation. I could not obtain a more minute account of the case, as he

was a man in low life, and had no medical attendant; but enough remained to prove that the judgment I had formed was correct. For, at this time, though one eye seemed hopelessly obstructed, the other was occasionally of use; while the patient observed, and without inquiry, or leading question, that whenever the general fits of rheumatism in the limbs come on, the eye became blind, from the closing of the pupil, recovering again when those ceased. I need only add, that as the disease had at this time lasted many years, the fits were no longer as regular as they had originally been, as happens in all chronic intermittent disorders; and as the contraction of the pupil accompanied them then accurately, it is probable this had done so from the commencement, though the exact particulars had been forgotten." 281.

Dr. M. suggests, that amaurosis is sometimes dependent on a neuralgic affection, and informs us that, while his work was in the press, two well marked cases of amaurosis of one eye, produced very pointedly, and within a few weeks, by a neuralgia occupying the external part of the orbit. The gradual paralysis of the nerve, and the total absence of all other affection of the head, or of the corresponding eye, offering evidence as clear as could be desired, of the real source of the disease, and of the truth of the above conjectures."

"I may here introduce a fact which appears to me to bear on this question, and on the original one, viz. the power in this respect, of the inflammatory diseases; but of the value of which I shall suffer others to judge. This fact is, that in the Mediterranean, and in the same districts where that ophthalmia which I suppose to be the disorder under review is common, *nyctalopia*, as it is there improperly called, or in reality, the loss of vision after sunset, is a very common affection: while I need not remark that this is, in fact, a modified amaurosis, or a partially, or moderately paralytic affection of the retina or nerve." 289.

After a philippic against the sub-divisions of the medical art into oculists, aurists, dentists, &c. and still more against spine, liver, and stomach doctors, our author enters on a consideration of the treatment of rheumatic ophthalmia. There can be no doubt that, while this inflammation was or is confounded with common ophthalmia, and the usual depletory measures employed, the practice will be not only unsuccessful, but even injurious. The fundamental error consists in looking at the disease as a purely local inflammation, and over-looking "the constitutional affection which belongs to every neuralgia." Mr. Wardrop is acknowledged to have perceived the difference between the rheumatic and the common ophthalmia, though not the true nature or cause of the former. Mr. W. varied the treatment, and with success. The chronic cases of ophthalmia too, which form the overwhelming majority, are still confounded with common inflammation, and consequently maltreated. The bark has been used either

empirically, or at the end of treatment conducted on opposite principles.

Dr. M. has already said, that in all intermittent and neuralgic diseases, the evacuating and debilitating system is pernicious—more especially blood-letting, both general and local. He does not deny, however, that in some cases of intermittent and remittent fevers, moderate depletion, at the beginning, may be useful.

"Thus it is in this ophthalmia, when violent, and particularly on the first attack; since the effect may often be to reduce the local disease which threatens local injury; while, though that remedy be really pernicious as it regards the constitutional affection, inasmuch as it commonly renders that more obstinate, the evil from this cause would be as nothing compared to the possibly impending local evil. It is plain therefore that I do not absolutely exclude blood-letting, both general and local, in this ophthalmia, at least when recent and severe; yet I think it highly essential that the reasons for permitting its use should be duly understood, as I trust they will now be by reverting to what was formerly said on this subject." 298.

The disease, in short, is not to be considered as a purely local inflammation, but as a peculiar disorder connected with and dependent on a constitutional cause, which cause is inconsistent with the depleting system, except in rare cases. In the chronic cases of this ophthalmia, the evacuating system is positively injurious—and the consequences sometimes most serious. Low diet and abstinence from wine are considered by our author among the *lædientia* in this class of complaints. The following case will prove illustrative of this and of several other points under discussion.

"The person in question, an artisan under the patronage and care of an opulent family delighting in physic, was seized with the common neuralgia of the face, occasionally in its more ordinary form, and at other times under that of toothach. I was permitted to cure this by means of arsenic; but after a short time it returned in the temple, and was then followed by a tolerably severe ophthalmia, affecting the conjunctiva of the neighbouring eye, and also attacking the iris. Nothing could be better marked than the disorder, as it was attended with a distinct intermittent and quotidian cold stage, and as the neuralgia of the temple was equally regular; while the contraction of the iris was also as periodical, occurring once a day, and lasting a determinate number of hours.

"I attempted of course to explain my views of the character of the disease, while I proposed the method of cure; and with exactly the same success which I have generally had, as well with patients as with my brethren of the profession, for these twenty years and much more; at the manner of which I can now but smile, while I regret the price at which the unfortunate patients have so often purchased this imaginary triumph.

"The patient was therefore sent to an oculist, at that time of high reputation; it having

been concluded, as it is still, that neither physician nor surgeon could possibly understand a disease of the eye like the man of experience; such are the ideas attached by the vulgar to a word, which, if their meaning was the true definition of that term, would make the oldest nurse, or the empiric who sees a hundred patients in a day, the best physician; just as he who has manufactured the most tons of Glauber salt and calomel in his life-time, is the most philosophical chemist.

"If out of humanity to the unfortunate patient, I attempted to explain the case to the oculist, the suggestion was received just as I expected; and, from that time, I could but watch, for instruction, the progress of the case. The first effect of local blood-letting, blistering, and topical applications, was a great increase of the inflammation; and as the same means were continued and repeated, the disorder became daily more severe; while, the Neuralgia also increasing in severity and extent, and the intermittent becoming much more strongly marked, it was declared that there was a flow of blood to the head; and so forth. General blood-letting from a vein, together with that from the temporal artery, was therefore adopted and repeated; while after a certain progress in this practice, aided by more topical remedies, more purging, and more low diet, the patient became so ill that he could no longer attend the oculist, and was therefore sent to an hospital. These operations occupied about two months; and if I was, after this, cut off from as frequent a sight of the patient as formerly, I was easily able to ascertain, before this imprisonment, that he was labouring under an inveterate quotidian intermittent, with a Neuralgia that scarcely left any repose, extreme debility with various nervous affections, and a partial fatuity; all of them the effects which I had gradually foretold to his patrons, as any one may foretell them under such practice; while the inflammation was such as apparently to extend to the bottom of the eye, from the excessive and constant pain, and while total blindness on that side had also resulted from the complete closing of the iris.

"In the hospital, all this, in the usual way, justified more bleeding and more of every thing which had already proved so injurious; while the disease persevered without a single feature of alteration, except for the worse, during nearly three months, when the gradually increasing fatuity became a mania, and the patient attempted to destroy himself by cutting his throat. The attempt was however unsuccessful; and after the wound was healed, he was sent home, to be transferred to a lunatic asylum, during which interval, I was enabled for a week or more to see him daily. He was then in a state of melancholy fatuity, rather than of proper mania, while the inflammation continued, but in a comparatively mild state, with occasional headach, of apparently great severity and still periodical, though the state of the intellect prevented

any very accurate examination. What was done in the lunatic hospital, I could never discover; but in about two months he died, and, as I understood through his wife, with the eye still in the same condition." 308.

The above case is extremely interesting; and our author avers, that every symptom, as well as the general progress, is that which occurs, in a greater or less degree, not only in this ophthalmia, but in every anomalous intermittent and neuralgia, "wherever the evacuant practice has been pursued."

"Of the topical applications I must observe, that there are even acute cases of this disorder, sufficiently teasing to the patient, and even alarming to timid ones, where the mere local use of stimulants does alone remove the disorder; the constitutional affection in such instances being perhaps trifling, or even, it may be supposed, nothing; or else disappearing spontaneously, or from slender changes of circumstances, as intermittents themselves, equally slight, so often do. In such cases, I know not that any thing is more efficacious than hot water, as hot as it can be endured; while in the chronic relapsing attacks it is often sufficient alone to the cure. In all these cases, acute as well as chronic, persistence is most necessary: but in saying this, I must also remark on a mistaken and injurious practice, not very rare, namely, that of applying ice; while I ought to say, generally, that cold washes of all kinds are either useless or mischievous. In the chronic cases also, especially, very strong metallic solutions, such for example as sulphate of zinc in the proportion of ten grains to the ounce of water, often remove the inflammation; while this particular class of remedies also dissipates the opacities of the cornea, unless caused by pustule or ulceration, or unless very dense, from repeated attacks. No incurable opacity from mere inflammation in this disease, ought in fact to exist: and when it is not prevented or cured, there has been neglect somewhere. Of other applications, opium, both within and without the eye, is often also useful: but let me remark here, that its chief, or almost sole value, is when applied on the subsiding of the paroxysm, or during that remission which can always, with care, be discovered: diminishing thus, as in all the neuralgic affections of tender parts, that soreness, or pain, or uneasiness, which persists after the proper paroxysmatic attack has passed away. Thus is also the internal use of opium useful in the same circumstances. As far as this substance is of use as an application in the chronic cases, it must, I think, be classed with the stimulant remedies already mentioned.

"Lastly, in all the modes of this disease, that is, in the chronic ones at all times, and in the acute, whenever the febrile state permits, or when such evacuation as may be judged necessary has been premised, the remedies are those of intermittents and neuralgia; namely, bark, and the tonics, under all those regulations which I need not again discuss; though I ought to remark, that in numerous cases of

the long continued and relapsing disease, and in many indeed of the acuter or more severe ones, and even when of some standing, I have found both arsenic and bark eminently successful without any other aids, while rarely failing to cure a new case within even a few days. As usual in all other cases of neuralgia under every variety, the inflammation has been more tantalizing, and the remedies less actively efficacious, as it has been of longer standing and more subjected to a previous course of maltreatment; though I can scarcely, with any effort, recall a case to mind, of whatever character, which was not cured, when the patient's confidence corresponded to my own. These, in reality, are the true remedies of this ophthalmia; a fact which if it had been always known, would have saved thousands from blindness as from suffering; and not only so, but from broken constitutions or even worse evils; since the long persistence of this disorder produces the same effects as the similar duration of any intermittent or any Neuralgia." 318.

To the above remedies must be added good diet and wine, by which alone the disease may sometimes be cured, when protracted by an opposite system. For more minute observations on the remedies, the reader is referred to the general discussion on the treatment of neuralgia.

#### CHAP. XI.—ON THE CONNEXION BETWEEN NEURALGIA AND INTERMITTENT.

If our author has shown that all the diseases treated of in this Essay do occasionally or often arise from malaria—not, of course, excluding the occasional action of other causes, as cold, &c. it forms a strong proof of a community in the nature of these diseases. The following passage offers an example of this family connexion.

"In this case, the situation was so decidedly subject to Malaria, that scarcely an individual, out of many different families which had resided in it, had escaped intermittent at some period of their stay. In one season, and in one family consisting of twelve or fourteen persons, the following were the effects in as many individuals. One tertian; one double quotidian headach; another tertian; one diseased spleen; in one individual, aged only eighteen, a temporary hemiplegia with obscure quotidian; a second case of palsy in one leg in a person of twenty, with obscure quotidian and symptoms of diseased spleen: a regular Neuralgia of the face, of double tertian type. In a following, distant season, and in some of the same persons, there occurred palsy of the face with imperfect speech, an attack lasting beyond a week, and replaced by quotidian neuralgia (Tic;) a double tertian, common intermittent, terminating in a quotidian, or double tertian, neuralgia; a quotidian with neuralgia in the shin bone; the same patient having had, in a preceding season, a common tertian so obscurely marked, that he was ordered to Italy for a consumption, (a consumption which was cured by two

ounces of bark and a change of place to ten miles distance,) and, in a following one, having been attacked again with a double tertian, of which one fit was attended by the neuralgia of the skin and the other by a headach.

"This particular instance, it will be seen, embraces a considerable number of varieties under the two heads of intermittent and neuralgia; while I might even have extended it, by adding what occurred in other seasons, in the same place; among which I might have enumerated an irregular intermittent with neuralgic palpitation of the heart; an acute hepatitis (probably dependent on the same cause;) two instances of diseased spleen; one of neuralgia, with obscure intermittent, in the foot; one of periodical toothach with double quotidian; one of periodical quotidian rheumatism in the arm: one of quotidian with irritability of the bladder: a second, of very severe neuralgia of the heart, replaced and cured by a common quotidian; and one of a periodical general chronic rheumatism, of a most defined type and quotidian character." 324.

Our author has not a doubt, nor have we, that the same cause acting on different persons, produced all these disorders—more especially as the same individuals suffered, in different and subsequent seasons, several of the above mentioned forms of disorder. A remarkable instance is stated, in the person of a gentleman, with whom the author was intimately acquainted for nearly thirty years, during the greater part of which he was harassed with the various forms of chronic intermittent.

"In mere fever, this patient experienced various remittents, together with tertian, double tertian, quotidian, and double quotidian, in different years; and, in the anomalous varieties, what may perhaps be referred to the asthmatica, and to the stranguriosa, and also what may possibly be the nephralgica of Sauvages; together with the emetica, the hysterica, and the soporosa, of the same arrangement. These intermittents also, at different times, were united with, or succeeded to, or were replaced by, periodical and marked general chronic rheumatism, periodical local rheumatism in a limb, and rheumatism of the face, with repeated slight attacks of the ophthalmia of one eye, attended by hemicrania. In simple neuralgia, this patient also experienced that of the face, repeatedly, long relapses of pure hemicrania, clavus, that of the eye, or optic nerve, sciatica, and a similar affection in one radial nerve and in the anterior crural; as, on different occasions, he suffered quotidian intermittent toothach, and the most severe neuralgia of the heart which I have ever witnessed, recurring annually for many years, replacing, once a local periodical rheumatism, and more than once replaced and cured by a quotidian simple intermittent.

"This is probably a rare case of severity and multiplicity, as the case itself was remarkable for its inveterate duration; but I doubt

not that it can be paralleled, if not equalled, by the experience of others. But it is plain that it can be so paralleled, only by taking the same views of these diseases as myself; since, under the present opinions, most of those would have been considered as independent disorders, accidentally meeting in a single subject." 329.

To these two branches of evidence, community of cause—co-existence and interchangeableness—our author adds another, the effects (whether good or bad) of remedies. Throughout the whole catalogue, it is to the same class or system of remedies that we must look for the cure—and these are all remedies acting on the constitution—a fact that strongly confirms the view which our author has taken. Even when the remedies are not medicines, as change of air, mental impressions, &c. the same argument holds good. They act on the whole system, and thereby relieve the local neuralgic disease. Again, the same system of treatment which is injurious in one of these diseases is injurious in all the rest of the class—and the *same kind* of evil consequences arises in all as in one.

"Whether it be an intermittent of the most ordinary character, whether it be an anomalous one, or should it be any of all the neuralgic diseases, however apparently local and simple, it is the constitution, or the system at large, which suffers from that improper treatment, and in the same manner; while as far as the local, or even the general disease may suffer, it is, in all, also, in the same manner; namely, that they become confirmed or aggravated, or acquire a tendency to recur when they would otherwise have terminated." 333.

The following is an abstract of all that precedes, and in the words of the author.

"The abstract in question is therefore the following, passing over the community of remittent and intermittent fevers, as an admitted fact. Intermittent fevers arise from malaria, certainly, as principally, and from mere cold possibly; but are renewable by mere cold, when once they have existed.

"They are often attended by peculiar local symptoms producing the anomalous varieties, while, when the febrile state is slight or obscure, these local disorders appear to be the chief disease.

"Such local disorders are either affections of the nervous system, or of an inflammatory character, and they have been fully described.

"The same intermittent fevers, more or less distinct, are accompanied by all the neuralgiae that have been described, whether these consist of simple pain, or are attended by inflammation; and when the febrile state is slight or obscure, those local affections appear to form the chief disease.

"If intermittent fevers alternate with all the anomalous local symptoms or diseases, so do they with all the neuralgic diseases: and in such cases, the supervention of one is the removal of the other.

"Thus also, all those local diseases, includ-

ing all the neuralgia, alternate with each other; or the appearance of one form is the cure of a preceding one.

"Many of the neuralgia will exist almost simultaneously, or else in alternating paroxysms; these having any of the types of intermittent.

"They also exist in alternating paroxysms with simple intermittent: or a particular doubled type will consist alternately of a paroxysm of pure fever and a paroxysm of neuralgia.

"The same individual, under a persevering intermittent, will experience many of the anomalous forms of that disease, and also many of the neuralgic diseases, in alternation or succession, or else in union; and, in such cases, the type, and the hour of recurrence, will be the same for all the forms, even through a long course of years.

"Malaria will produce the neuralgic diseases directly, as, probably, will mere cold; but they are renewable by mere cold when once they have existed; and in these cases, though the intermittent fever is probably always present, it may be so slight as to be overlooked. In this, the first cause, neuralgia, in all its forms, resembles intermittent: but it differs, inasmuch as it can be excited by direct injury of a nerve; a difference however which is of no moment as to the general identity, because we know of no means of thus injuring the entire nervous system so as to produce general intermittent.

"The same malaria, in the same spot, acting on different individuals at the same time, will produce either intermittent or neuralgia, and every form of each.

"Intermittent and neuralgia, in all their forms, are cured by the same remedies, and injured by the same wrong treatment; and those remedies are constitutional ones, whether the diseases be local or general; while, very particularly, the local and the general diseases both, are cured by operations on the imagination.

"The conspicuously wrong treatment for all of these diseases, whether neuralgia or intermittents, consists in the debilitating practice, as the right treatment is found in what is esteemed the reverse; and whatever be the disease, be it local or general, when that practice is pushed so far as to become injurious, the injury is always of the same character, affecting the entire nervous system." 337.

We must pass over a short chapter, (XII.) on certain consequences of intermittent and neuralgia, in order to devote more of our remaining space to—

#### CHAP. XIII.—ON THE CURE OF NEURALGIA IN GENERAL.

If our author be right in considering neuralgia as a disease dependent on a constitutional cause, however prominent may be the local symptoms—in short, if it be a mode of intermittent fever, or fundamentally of the same nature, it is natural that the same system of treatment should be enjoined. To this he

was led, more than twenty years ago, from theory, and is now confirmed in the propriety of the system by practice and observation. This plan of treatment has never failed him in recent cases, and has often succeeded in those which were of long standing. In this chapter, our author has been unavoidably led into considerable repetition, as the principles of cure, and even many of the individual remedies, have been broached or detailed in preceding chapters, more especially when treating of intermittent. It will not be necessary for us, however, to go much into the minutiae of the treatment; since it was of infinitely more importance to connect the etiology and pathology of these varieties of disease, than to dwell on their management when once recognised.

The first remark, and it is a very important one, is this—that the neuralgia often disappear without medicines, by a spontaneous effort of the constitution—while they are also truly cured by circumstances that are not noticed, and to which credit is not given. This explains the reputation which has been gained by particular modes of cure, which were, in reality, either nugatory or injurious in themselves. Hence improper practices are continued from mistaken observation. Particular periods of life, as the climacteric in males, and cessation of the catamenia in females, often root out old and inveterate neuralgic affections, that had defied all remedies. The most frequent of the real, though little observed causes of cure, however, will be found in change of air, and of general habits of life—which, by the bye, is a direct remedy of great power, though often recommended to the patient when the practitioner is tired out with fruitless attendance. The effects of moral impressions are underrated and ridiculed. A change of physicians, or the acquisition of a new and strong confidence in a new and reputed person, often effects a cure, where the remedies prescribed had little or nothing to do in the business.

"Hence an actual benefit often derived from empirical remedies and empirics, or from physicians of popular if false reputation, or of peculiar, perhaps insolent or coarse manners: an influence extending widely over all the nervous disorders, of which so many occur from the general cause of disease which includes the subjects of this essay." 370.

This, in reality, is the cure by charms. This is the reason why quack medicines, the composition of which, being unknown, is more respected, effect cures, when the same medicines fail in ordinary prescription.

"Hence that universal confidence in substances and formulæ and numbers and quantity, and hence especially that enormous consumption of empirical remedies; compounds found in every pharmacopœia, but divested of all their virtues under this form, because separated from the mystery and the incantation. The physician who attempts to reason with his patient on the effects and utility of his remedies, pays a most unmerited compliment to

human reason: and while he will fail to influence, he will not be very long in discovering that he will shortly have no patients to enlighten or to cure. With the loss of the mystery, the merit is at an end: and he who proves himself to be the true philosopher and physician, is precisely the man who will never be trusted." 371.

This is a melancholy picture, but we fear it is too true. It may account for the immense reputation of a living practitioner, who never reasons or says a civil word to his patients, but drives them from his presence, all having, and all knowing before hand, that they will have the same prescription or box of pills, whatever be the nature of the malady! Dr. M. relates a case of *tic douloureux*, which he had long treated in vain with arsenic and other remedies, but which instantaneously vanished before the solemn gibberish of an old woman, celebrated for the possession of a charm against toothach.

We know that intermittents are sometimes cured by giving a powerful anodyne just before the expected paroxysm, which breaks the chain, and interrupts the morbid process. The same is sometimes done in neuralgia, and ought not to be neglected, though they are not the real remedies in this class of maladies.

"But the chief and the most energetic remedies in neuralgia, be the form what it may, are the tonics; and of these, as in intermittent, the most efficacious are bark and arsenic. Each, in its class, may stand at the head of a list which it is fruitless to enumerate, since it is so well known to even every druggist; nor need I repeat what relates to the mode of using these, since it is precisely the same as in intermittent fever. That there is any one vegetable tonic more efficacious than bark, or differing in the mode of action, as far as we now know these remedies and their powers, I am inclined to doubt: but not to deny that such do exist, since I consider that we are very far from having exhausted the medicines of the vegetable kingdom; so far, indeed, as rather to be in an absolute infancy of knowledge on this subject.

"While with bark as the type, the physician may command the whole range of astringents, aromatics, and bitters; he is also bound to try one where another fails; and thus may it possibly be discovered, even that what is most efficacious in common intermittent may not be most so in the neuralgia, differing as they do in respect to the local action in the latter. But as I can, on this, say nothing of any great value from my own experience, I must be satisfied with having pointed out the leading principle and the road to be followed; as I need also do no more than suggest those combinations, whether of these vegetable substances themselves, or of the same with narcotics, the occasionally superior value of which in intermittent is well known.

"If arsenic be admitted as the type of the metallic remedies, it is equally easy for the physician to command the whole range of these; so well known, that I could add no-

thing respecting their powers; while I much suspect that very fanciful values have often been attached to some of them, from that common mechanical system which looks more to variety of medicines than to a knowledge of diseases. Much has indeed been lately said respecting the especial value of the carbonate of iron (as it is generally called) in the common neuralgia (*tic*;) while in reality it has been administered as a merely empirical remedy, and without system. In my own experience, I had resorted to it long before these recommendations, both in intermittent and neuralgia; but without discovering that it possessed any collateral merit above arsenic, while far less generally efficacious as a remedy. But, on all these remedies, I shall be very glad to hear of the experience of others, since I have wanted both temptation and opportunity to do them justice. As to the value of arsenic compared to bark, I can only repeat what I said formerly, that I have found it more generally efficacious in neuralgia, while it has appeared less so in intermittent: often acting almost like a charm on the pain, and even in cases of many years' duration. But on this also I am ready to be corrected; as I am satisfied that the experience of no one individual, even were it far greater than mine has been, is sufficient to decide on subjects of this nature." 377.

Dr. M. makes no distinction, as to treatment, in the different forms of the disease—with the exception of sciatica, in which he has not had much experience. A medical friend, residing in a district noted for this disease, informs our author that he has derived the most marked advantage from this remedy in numerous cases.

When the attacks of intermittent or neuralgia are either very irregular or of long standing, the power of medicine is very limited in breaking the chain of morbid action. A single blood-letting has often rendered a recent intermittent regular, though previously irregular; and Dr. M. suggests, but without having experience on the point, a similar experiment in irregular neuralgia, while he condemns the practice of repeated depletion. Mercury, pushed so as to affect the mouth, will sometimes render agues amenable to tonics, though previously rebellious. The same may be tried in the neuralgia, since, in both classes, the glandular viscera are often deranged, and the mercury acts beneficially in correcting such disorders. But as the greater number of cases which present themselves are now chronic, and, consequently inveterate, probably from the wrong treatment employed when they were recent, so the cures will be comparatively few, however judicious the remedies. It is not until the old cases shall have died off, and a generation of the same diseases has arisen under the improved practice, that a fair trial can be given to the latter.

One great cause of neuralgia becoming chronic, is the caprice or impatience of the afflicted. Anxious for a speedy cure, they

are led away in succession by name after name, and recommendation after recommendation, the consequence of which is, that no steady system is pursued, and no cure effected. The work, half done by one, is reversed by another, till, at length, the patient is rendered sceptical as to the skill of the practitioner or the potency of medicine.

But the paramount object is to withdraw the patient, if possible, from the operation of the primary causes of the disease. On this account, the locality of his residence should be carefully examined, according to the rules which have been already laid down by the author in his *Treatise on Malaria*, and of which the reader will find ample analysis in this journal. Without such removal from the sphere of the causes, no permanent cure need be expected. The dread of moisture should ever be in the patient's mind—he should remove to a dry, but not to a cold situation, since cold itself is an exciting cause. The change of scene and air resulting from travelling alone, would often effect the cure, both in agues and the neuralgia.

“What remains as to the general treatment, relates to diet. As an intermittent, whether recent or chronic, I have no hesitation in saying that the usual full diet of persons in health, with a rational use of wine, forms an essential aid to the cure; and that it has often proved a cure in itself, when used as replacing the opposite and pernicious system. But I shall not enlarge on this; as the evils arising from low diet are involved in those belonging to the debilitating practice on which, even after all that I have said, I must offer some additional remarks hereafter.” 386.

Of the local remedies for neuralgia we need say but little. Dr. M. like Dr. Heberden, found blisters to aggravate the pain, when placed near the nerve affected. What has been called a perpetual blister is still worse, as proving “almost always a positive aggravation, not only of the local disease itself, but of the general irritation and disorder of the system.”

“The only local remedy from which I have really seen such advantageous effects as to induce me to recommend it, is the application of steam directed by the usual means of a pipe, to the affected part; while of course, the same reasoning applies, if in a minor degree, to fomentations and hot water. The value of these latter applications, indeed, in rheumatism of the face, in the rheumatic or neuralgic ophthalmia, and in sciatica, has long been known; if, from their too great simplicity, and their not being ‘made up in the apothecary’s shop,’ they are less valued than they deserve. But while I consider the blast of steam as the most effective of all the modifications of this practice, I have often succeeded by means of it, in removing, almost instantaneously, a paroxysm of the severest neuralgia of the face, and, occasionally, so as to put a stop, in the chronic disease, to an entire relapse, which, from all the patient’s

past experience, was expected to last some weeks.” 391.

Cold applied to the part does sometimes give temporary, but never permanent relief. On the contrary, it generally exasperates the subsequent sufferings of the patient.

“Though I have already spoken of the use of narcotics, this is a more convenient place to point out one advantage to be derived from them; a fact which I purposely postponed, on account of its connexion with the useful effects of hot water and steam. As a means of diminishing pain during the painful state, they are nearly useless, unless pushed to such an excess as to stupify the patient; in which case, it is probable, as I already insinuated, that their effects are injurious, while it is easy to comprehend how they ought to be so, by inducing, indirectly, that debility which so prolongs and aggravates all the neuralgia. But when the acute state is past, they become useful, as tending to remove that soreness which remains after the chief pain has ceased, and also by reducing the general irritation which has been excited by it. Thus also they sometimes act usefully, even as local applications, at least to sensible parts; and it is probably on this principle chiefly, that they are of advantage in the neuralgic inflammation of the eye.” 394.

Dr. M. next adverts to the *lædientia*, and satirises, with no small degree of force, the once celebrated practice of dividing the nerve in neuralgia; but as that practice is now laid in the “Tomb of the Capulets,” we need not trouble our readers or ourselves on that point. The use or rather abuse of excessive purgation is next denounced by our author, and not without reason. Low diet, of course, comes in for its share of censure, and, as far as neuralgia is concerned, we have no fault to find with our author’s strictures. But when he comes to ridicule the plan of abstemious living in dyspeptic complaints, he goes beyond his depth, and proves to those who have infinitely more experience than himself, that he knows nothing about the matter. This is the misery of having a hobby-horse. A man hits upon one good idea or thing; but he is not content with making that idea or thing useful to the world—he must push it to extremes, and endeavour to make it the “universal good.” Dr. Macculloch must be well aware that no medical journal has done him so much justice as ours; and that we have proclaimed his merits through every region of the earth, which “the rising or the setting sun surveys.” He is too sensible not to know that our praise is the more valuable in proportion to the impartiality which we display towards his failings—at least what we consider his failings. The following case, which we shall give in Dr. M.’s own words, does not at all support his anathema against *abstinence* in dyspepsia, though it is brought forward by him as a “COUP DE GRACE” to that system.

“This unfortunate philosopher had been long subject to the usual dyspeptic and nervous symptoms of studious men, and was of a

sallow and emaciated complexion; appearing, in familiar language, to be far more in want of additional blood than of its abstraction, while his disorder was continuously aggravated by a system of low diet, adopted on the same mistaken views. Passing every day with him, in company with an English physician, it was easy to watch that over which we had no control; as there would also have been no propriety in attempting to oppose 'the best advice in Paris.' Headach was, as usual, one of the occasional symptoms; and on one unfortunate day he was induced to send for his surgical friend, by whom he was immediately bled. The headach, on the following day, continued, or rather returned, as it had formerly done, but with increased confusion of thought; the pulse and all else indicating, to the English physicians in question, increase of general debility, and compelling us at length to offer advice, which was however opposed by the usual arguments. A second blood-letting of course took place; and the consequence was that he became, but only in the night, partially delirious; a result easily explained, in its very limitation. It was then determined in full consultation, that there was inflammation of the brain, to the exceeding surprise, not without remonstrances, of the two English physicians; and, consequently, with the addition of blisters, shaving the head, and ice, another blood-letting was ordered and practised. The delirium then increased, while the pulse became feeble enough, as might have been supposed, to have made any man reflect; but as this did not happen, or rather as the reflections took the opposite course, the practice was persevered in, and on the following day the patient died: leaving the physicians, doubtless, convinced, as usual, that he had not lost blood enough. Such is a French case; but it would be easy to give no small number of parallels from English practice; and should it make no impression at present, the day will come round again when its value as well as its nature will be understood." 403.

Doubtless there might be many cases collected on both sides of the channel, where sanguineous depletion has been carried too far—and where irritation is mistaken for inflammation. This is the great source of error. Where inflammation actually exists, there cannot be very much mischief done by taking away a little more blood than is necessary. But where the *neuroses* are treated as *phlogoses*, which was the case with the unfortunate gentleman in Paris, then indeed the havoc of constitution is tremendous, and life itself is often sacrificed. With the following specimen of our author's sarcastic strictures on physicians and physic, we shall close this article.

"It were well indeed if not only ruined constitutions, but even death itself, were not the frequent, the almost daily result of physic thus misapplied in all the analogous and parallel cases, as also in some others; the produce of a combination of system, fashion, and ignorance, which renders physicians and phy-

sic the just terror at present of all those who can see and distinguish. It is difficult to speak without high indignation as well as horror, of what we thus daily witness: to suppress the former is impossible, when our own, perhaps dearest friends, have thus been destroyed: and well now, perhaps, will he decide, who, like Napoleon, resolves to exclude this art and its professors entirely; for, on the arithmetical average, he will assuredly be far on the side of security. It is but to open our eyes to see the truth of this every day; while if it is over the ruined health, or the life, of females that we shall most often have occasion to grieve, from the obvious reason that in them the nervous affections thus mistaken and maltreated, chiefly abound, or are chiefly brought before physicians, so has there been a rapid increase of the evil, from the numbers who, returning from a continental residence with the consequences of marsh fever which I have so often described, have been subjected to this, truly mortal as well as mistaken treatment." 421.

The last chapter in the work is one of a different cast from the others. Having terminated his Essay when his evidence was exhausted, and his induction carried as far as it could safely go, Dr. M. ventures on a chapter of "conjectures respecting the condition of the nerves and nervous system in intermittent and neuralgic diseases." These conjectures are ingenious, and some of them plausible; but we have no space left for samples of them here. We part from our author with feelings of much respect and esteem—believing that he has contributed much more to the advancement of our science than many who have held their heads much higher in the republic of medicine.

From the Medico-Chirurgical Review.

ILLUSTRATIONS OF THE DISEASES OF THE BREAST. By SIR ASTLEY COOPER, Bart. F. R. S. Sergeant-Surgeon to His Majesty—Consulting Surgeon of Guy's Hospital, &c. &c. In two Parts—Part I. Quarto, pp. 89, with nine beautifully-coloured Plates, containing numerous Figures. Longman and Co. Feb. 1829.

When we recollect that hardly a ten-millionth part of the actual and useful experience of the profession is transmitted to posterity, or passes beyond the individual who first acquired it—when we reflect how very few indeed of those who honestly record what they know, have yet the gift of accurate perception, and the power of legitimate deduction, we may, or at least we should, be grateful to those eminent men in our profession, who, having passed a long period in unlimited practice, employ and amuse the leisure hours of mature age, in faithfully perpetuating the fruits of their observation for the benefit of their successors and of mankind at large. Such a man is Sir Astley Cooper. That the tide of fame and fortune which rolled upon him for a quar-

ter of a century, till he was obliged to fly from it, should call up a moderate quantum of envy, is just as natural, nay, is as physically certain, as that the meridian sun should draw forth a halo of exhalations from a marshy soil. That Sir Astley Cooper is a pattern of infallibility—a genius of universal acquirement—a prodigy of learning—in short, an “*admirable Creighton*” of the age or of the profession, we are very far from asserting. There have been no such perfect characters of late, even among those who satirize the author of the volume before us. But we look upon Sir Astley as a man endowed with very good natural capacity—as possessing great zeal in the prosecution of surgical science—unequalled physical powers—assiduous observation—and what are better (in these days) than brilliant genius or superlative talent,—*HONESTY* and *VERACITY*! The clinical facts and practical precepts of Sir Astley Cooper, will be quoted and acted upon, long after the marble monument erected over his mortal remains shall have been mouldered into dust by the invisible waves of *TIME*, that “*Edax rerum*,” beneath which all material fabrics must fall.

It is not generally known, but it will ultimately be made patent, that throughout a professional experience, unequalled in any age or country, the author of the volume before us has constantly employed most able artists to make accurate drawings of all important morbid structures which presented themselves to his view, or with the living symptoms of which he became acquainted—and this independently of preserving a great proportion of the said morbid structures in spirits. The consequence is, that Sir Astley Cooper possesses a collection of drawings infinitely surpassing that of any other surgeon in the profession. To make these available and useful to his brethren, through the medium of the press, is at once honourable to the individual, and beneficial to the public. We know not a more enviable occupation, in age, than that of perpetuating, for the good of posterity, the labours of youth. This task our author is now pursuing, while actually in the prime of life, and in the entire possession of every faculty:—in proof of which we shall, at once, proceed to an analytical delineation of the splendid volume before us—as far, at least, as the letter-press is concerned. We regret, indeed, that we cannot convey to our readers an adequate conception of the beauty and fidelity of the plates, which will only enrich the libraries of the more opulent members of the profession. We shall, however, endeavour to diffuse the practical descriptions and precepts of our experienced author over as wide a space as possible, through the instrumentality of the periodical press.

The work is dedicated, in a short but energetic address, to B. Harrison, Esq. Treasurer of Guy's Hospital;—and in the preface Sir A. informs us that he has divided these illustrations of mammary diseases into two parts—the malignant and non-malignant. It is with the latter class that the present volume is occu-

pled. Our author thinks it right to observe, however, that although he has here confined himself to the description of diseases which are not malignant, and which do not arise from a vitiated state of the system, contaminating the parts in their neighbourhood, or even at a distance from their original seat, yet that—

“Some of these swellings, when they have existed long in a dormant state, will have alterations produced in them by changes of the constitution, by which their extirpation may be rendered necessary; for malignancy may be lighted up in them by constitutional disease—by anxiety of mind—and by the cessation of the menstrual secretion.”—*Preface*.

The work is divided into ten chapters, which we shall examine seriatim.

#### CHAP. I.—INTRODUCTORY.

In this chapter our author expatiates on the advantages which may be derived from the examination of morbid structures, and from a comparison of external symptoms with internal appearances.

Although we may not be able to cure some diseases, it is still a great advantage to be able to discriminate the remediable from the irreparable cases—the dangerous from the slight—those requiring the knife from those which do not demand so formidable a resource—and such as admit of a trifling operation from those that call for one of extreme severity.

The female breast is liable to almost all the diseases of other structures, besides some peculiar to itself. Yet, the uninformed surgeon is too apt to chime in with the vulgar opinion, and to confound all swellings of the mamma under the general term of *CANCER*. An examination of the diseased parts, after operations, shows the great variety which prevails in the nature and appearances of these swellings—and proves that, instead of their being all of one family, many genera of tumours actually exist. Some are the effect of acute, some of chronic inflammation—others of a specific action, malignant or harmless. It is therefore the surgeon's duty to discriminate these differences in the living body—which can only be done by a knowledge of what is revealed in the parts removed by operations, or the bodies of the dead. The following descriptive sketch is in Sir Astley's characteristic style, and is such a faithful copy from nature, that it will be instantly recognised as such, by every surgeon of the least experience.

“I have scarcely witnessed a stronger expression of delight than that which has illuminated the features of a female—perhaps the mother of a large family dependent upon her for protection, education, and support—who, upon consulting a surgeon for some tumour in her bosom, and expecting to hear from him a confirmation of the sentence she had pronounced upon herself, receives, on the contrary, an assurance that her apprehensions are unfounded. Pale and trembling, she enters the surgeon's apartment, and baring her bosom, faintly articulates—Sir, I am come to

consult you for a Cancer in my breast;—and when, after a careful examination, the Surgeon states, he has the pleasure of assuring her that the disease is not cancerous—that it has not the character of malignancy—that it is not dangerous, and will not require an operation; the sudden transition from apprehension to joy brightens her countenance with the smile of gratitude; and the happiness of the moment can hardly be exceeded, when she returns with delighted affection to the family, from which she had previously considered herself destined soon to be separated by death, with the alternative only of being saved by a dubious and painful operation.” 4.

Our talented author divides mammary diseases into three classes—1mo. those resulting from common inflammation, acute or chronic—2ndo. complaints arising from a peculiar or specific action, but not malignant, or tending to contaminate contiguous structures—3tio. those diseases which are not only founded on local, malignant, and specific actions, but which are connected with a peculiar and unhealthy state of the constitution. By a malignant complaint, our author means a local diseased action, which not only affects the parts in which it is originally situated, but contaminates those contiguous. He considers it as resulting from a morbid state of the constitution, and it is frequently accompanied by a similar disease in other, and even remote parts of the body.

“The first of these classes comprehends the acute inflammation of the organ, as the milk abscess; the chronic inflammation, which remains for a length of time in a state of indolent swelling, and often terminates after a lapse of weeks or months in an indolent abscess; and, thirdly, a lacteal tumour, in which a chronic inflammation is followed by an obstruction in one of the lactiferous tubes, and produces a large lacteal or lactiferous swelling.

“In the second class of diseases of the breast we find several species of tumour, and they are as follow:—

“1st, the Hydatid;—2d, the Chronic Mammary Tumour;—3d, the Ossific;—4th, the Adipose;—5th, Large and Pendulous Breast; 6th, the Scrofulous;—7th, the Irritable Breast;—8th, Ecchymosis of the Breast.

“In the third class we find the two malignant diseases, which consist of the scirrhus and fungous tubercle.” 5.

#### CHAP. II.—EFFECTS OF COMMON INFLAMMATION IN THE BREAST.

The symptoms and treatment of acute inflammation in this organ do not differ materially from that in other structures, excepting in the severity of suffering which it produces.

“It is adhesive in the first stage, suppurative in the second, and ulcerative in the third. A firm and sensitive swelling of the whole or part of the mammary gland is produced in the first stage; and the dense cellular or fascial membrane with which it is enveloped, and by which all its parts are united, not easily yielding to the inflammatory swelling, often occa-

sions most excessive suffering. The serous and fibrous portions of the blood are poured into, and fill the interstices of the inflamed structure, and the latter thus produces the solid swelling. To this enlargement succeeds a blush of inflammation upon the surface of the breast; throbbing, pulsatory, and very acute pain follows it; a particular prominence and smoothness are observed at one part of the tumour, with a sense of fluctuation from the presence of matter. The constitution is also highly irritated, which is evinced by the occurrence of shivering, succeeded by heat, and profuse perspiration. Over the most prominent part of the swelling the cuticle separates, ulceration follows in the cutis, and the matter becomes discharged through the aperture thus produced.” 8.

The foregoing process requires from ten to twenty days for its completion. Sir A. considers the principal cause of this phlogosis to be the rush of blood to the breast, or “milk-draught,” as it is called, when the infant is first put to the bosom. There are many other operative causes, however, as exposure to cold, the efforts of the child, the obstinacy of the nurse in not putting the child early to the breast,—and the too early introduction of stimulating liquors into the stomach of the mother.

“The best mode of treatment in these cases is to use, in the adhesive stage, a lotion of one ounce of spirit of wine, and five ounces of water, or of liquor plumbi dilutus to the part, and to purge the patient, by giving repeated doses of castor oil, or sulphate of magnesia. But if the patient suffer from the cold produced by the evaporation of the spirit, a simple tepid poultice may be substituted for it, occasionally applying leeches to the swelling, still recollecting that the chief dependence is upon purging.” 9.

When matter is forming, poppy-fomentations and poultices must be employed—and anodynes should be given to mitigate pain. As to the question, should mammary abscess be opened or suffered to burst? the following is the reply. If the abscess be quick in its progress, anterior in its site, and unattended with severe sufferings, let it take its course. If the abscess be deep-seated—tedious—attended with great pain and much irritative fever, perspiration and insomnolency—discharge the matter by the lancet. But we should not penetrate with this instrument through a thick covering of the abscess, as such an opening would not succeed in establishing a free discharge.

A quick succession of abscesses sometimes takes place in the breast, and leads to very protracted sufferings. Here opium and quinine will be required. Sometimes an abscess is produced at a great depth in the breast, and discharges itself by different apertures, forming sinuses of various extent.

“Now and then a deep-seated abscess forms between the posterior surface of the breast and the ribs, which, when it breaks, leaves a sinus which leads to the ribs. An

exfoliation of part of the rib afterwards occurs, occasioning a very protracted suffering; and in these cases, as well as in the former, injecting the diluted acids is the best practice." 11.

These milk-abscesses are not always entirely devoid of danger. Sir A. once attended a lady of very delicate constitution, and who lay-in while under great anxiety of mind, in consequence of her husband being imprisoned. A milk abscess took place—discharged large quantities of matter—and then, instead of healing, the whole breast became excessively swollen—a true fungoid excrescence appeared—and this disease destroyed her life.

If the abscess be small, the child may be put to that breast as well as to the other;—but if the mamma be much involved in disease, the infant should be kept to the sound mamma, while the diseased one should be drawn by the nipple-glass.

"These abscesses are sometimes the result of soreness in the nipples, which appears in three forms:—first, in simple excoriation; secondly, in deep cracks at the junction of the nipple with the areola; and thirdly, in deeper ulceration of the nipple itself, by which a part of it is removed. The suffering from these sores is often sufficiently great to prevent the frequent application of the child to that bosom, which leads to a great accumulation of milk, and to a degree of distention which occasions inflammation. To prevent this, the breast should be drawn; but the sooner the child can be restored to it, the better. The best application to the sore nipple is a solution of borax in water, in the proportion of a drachm of borax, three ounces and a half of water, and half an ounce of spirit of wine. Some use solutions of alum, some the sulphate of zinc, and some the supernatant liquor of a mixture of the liquor calcis with the submuriate of mercury. Also to prevent the nipples from becoming sore, to which many women are extremely subject, it is right to wash them some time before the lying-in with strong brine, which hardens the cuticle, and renders it less prone to ulceration and inflammation." 13.

#### CHRONIC ABSCESSSES.

The abscesses already described usually pass through their stadia in from three to five weeks; but, under chronic inflammation, an abscess is sometimes produced, which, from the slowness of its progress, and the absence of common inflammatory symptoms, is supposed to be a malignant tumour, and to require an operation.

"In proof of this, a woman was sent to me from Sussex who had a tumour in her breast, which I was requested to remove: and when she was seated before me for that purpose, I found, upon examining the swelling with attention, a fluctuation in its centre surrounded by a wall of hardness, with tenderness in the centre upon pressure. I therefore put a lancet into the seat of the fluctuation, to discover the nature of the fluid, and a considerable quan-

tity of purulent matter was discharged through the orifice.

"I was also requested to see an out-patient at Guy's Hospital, who had a swelling in her breast with a fluctuation in the centre, which had existed several months, into which when a lancet was put, a large quantity of matter was discharged. Although there was no discoloration, and the swelling had existed several months, yet I thought it contained matter, from the sense of fluctuation, and from the tenderness the patient expressed upon slight pressure, which would not have been the result if a serous fluid had been collected.

"In similar cases I have seen the operation for removing the swelling begun, and in its progress the knife having accidentally entered the abscess, the Surgeon, by escape of the matter, having been informed of his error, the operation was suspended, and a poultice being applied, the case ended favourably." 15.

As, in these cases, there is generally some fault in constitution, or vitiation of the secretions, the compound calomel-pill should be given at night, and the bark with soda two or three times a day—or the compound infusion of gentian, with soda and rhubarb.

#### LACTEAL OR LACTIFEROUS SWELLING.

This is so denominated by our author, because he supposes it to arise from a large collection of milk in one of the lactiferous tubes, the result of chronic inflammation in one of these conduits, near the nipple, with closure of its aperture, and obliteration of the canal for an inch or more.

"The patient applies to the Surgeon some time after delivery with a swelling in the breast; unpreceded by the symptoms of abscess, it distinctly fluctuates, and she complains exceedingly of a sense of distention in the part; and when the child is put to the breast to relieve it, the pain and distention are increased by the draught of milk which enters the breast so soon as the child begins to suck. The swelling is confined to one portion of the breast, from the nipple to the circumference of the organ, and it gives a distinct sense of fluctuation. The cutaneous veins are very large, but the part is otherwise undiscoloured. If a lancet be passed into the swelling, several ounces of milk are discharged; and the milk being suffered to rest for a few hours, forms a cream upon its surface. If a slight puncture only be made, the milk be discharged, and the opening suffered to immediately close, the accumulation recommences, and in a short time the same appearances and sufferings are renewed.

"When the distention of the swelling is excessive, it sometimes ulcerates, and discharges the milk which it has contained, by a small aperture at a little distance from the nipple; and the opening so produced often continues through the whole period of suckling, the milk being lost, from the aperture not being received into the child's mouth: and this opening is difficult to heal, until by

weaning the child, and by purges, the secretion of milk be entirely checked.

"The treatment which this case requires is as follows:—If the mother be prevailed upon to wean her child, as the secretion of milk will soon cease in this obstructed part as in other parts of the breast, a simple puncture will suffice to relieve the distended tube of the milk which it contains.

"But if the child still continue at the breast, the opening may be made larger, and the milk be suffered to escape at the artificial aperture whilst the child is sucking; thus imitating the natural relief which the ulcerative process sometimes produces, until the secretion of milk ceases, from the weaning of the child, and from purges to the mother." 18.

#### CHAP. III.—HYDATID DISEASE OF THE BREAST.

There are four species of these swellings—three of which are non-malignant. To the description of *these* our author directs his attention.

*1st Species.*—Simple bags containing serous fluid, and which Sir A. calls *cellulous hydatids*. Symptoms:—The breast gradually swells, being free from pain or tenderness—becomes hard, without fluctuation—enlarges gradually for months or even years, sometimes acquiring great magnitude. Sir A. has seen one breast weighing nine pounds.

"At first the swelling feels entirely solid, so that it bears a great resemblance to a simple chronic enlargement of the breast; but after a great length of time, a fluctuation can at one part be discovered in it, and then the breast begins to increase more quickly; and in several parts similar fluctuations can be detected.

"The cutaneous veins become varicose; but although the breast is immensely enlarged, it still continues almost entirely free from pain: but to this there are exceptions, for some persons feel an unusual heat, and some, as the breast increases, suffer pain in the part and in the shoulder.

"The tumour is extremely moveable upon the pectoral muscle; is very pendulous; and in some cases, the whole of the mammary gland, in others only a small portion of it, becomes involved in the disease.

"At length one of the fluctuating portions of the breast slowly inflames, ulcerates, and discharges a large quantity of serum, or of a fluid having its general character, but of a consistence somewhat more glairy; and the sac being emptied, and the external opening closed, if the fluid be entirely discharged, it is a long time before it re-accumulates; and sometimes the sides of the sac adhere, and the cyst ceases to secrete. In other instances I have known the swelling break, and discharge a mucilaginous fluid mixed with serum; and several of the cells in succession, and at distant periods, pass through the ulcerative process, and form sinuses, which are very difficult to heal." 22.

Except during ulceration, the general health remains undisturbed, and nothing but

the apprehension of **CANCER** would induce the patient to make her case known or submit to an operation. However large the breast becomes, however extensively it ulcerates, however freely it discharges, yet the axillary glands remain free from disease.

*Dissection.*—"When the swelling, and the breast in which it is situated, are examined, it is found, upon a careful dissection, that the interstices of the glandular structure itself, and the tendinous and cellular tissue connecting it, are in a great measure filled with fibrous matter, poured out by a peculiar species of chronic inflammation; but in some of the interstices a bag is formed, into which a serous or glairy, or sometimes a mucous fluid is secreted, according to the degree of inflammation attending it; and this fluid, from its viscosity, and from the solid effusion which surrounds it, as well as from the cyst being a perfect bag, cannot escape into the surrounding tissues; but by its quantity, its pressure, and by the gradual yielding of the bag, it becomes of very considerable size; and vast numbers of these cysts are found to occupy each part of the breast, producing and supporting a continued but slow irritation, and occasioning an effusion of fibrous matter, by which the breast forms an immense tumour, consisting of solid and fluid matter. Within these bags of fluid, Hydatids, hanging by small stalks, but some, which from their appearance I supposed to be simple cells before I opened them, instead of being entirely hollow, had a cellular tissue within them, in which a fluid was collected, which, although it produced the appearance of cells or Hydatids on the outside, within assumed the character of anasarcaous swellings.

"The breast, when not greatly enlarged, is almost entirely filled with *cellulous Hydatids*: some are produced in clusters, but the greater number are completely distinct from each other; and in those cases in which the breast is but slightly increased, the constitution is but little irritable, and only a slight adhesive inflammation accompanies it." 23.

The size of these cells varies from that of a pin's head to that of a musket-ball, of which an example is seen in the first plate. The cyst containing the fluid is highly vascular, the veins being greatly dilated. This disease, in its first stage, resembles simple chronic inflammation; but is distinguishable from it by the absence of tenderness on pressure, and the good health of the patient—proving it to be an entirely local disease. In the second stage, when fluctuation exists, it may be distinguished by the distinct seats of the fluctuation, and by the absence of tenderness; but the surest criterion is puncture of the bag, when a clear serum will be evacuated, instead of pus. From scirrhus tubercle it is to be discriminated by the absence of those occasional acute darting pains that accompany malignant affection—by the continuance of health—and by the absence of that excessive hardness which characterizes scirrhus. Sir A. has, however, seen a case "where

true scirrhus had hydatids connected with it." The tumour was removed, and again returned. It had the usual pain of scirrhus.

"In the treatment of Hydatid disease, no local applications are beneficial, and the constitution requires no attention, because the general health does not suffer from the complaint.

"If only one bag is discovered, and that is of considerable size, it sometimes, if punctured, does not again fill, as will be seen in several of the cases.

"But when the enlargement is excessive—when a multitude of bags are produced—when the weight of the swelling becomes several pounds—when the breast is very pendulous, and drags upon the surrounding parts, and shakes upon every motion—when there is great apprehension, on the part of the patient, of some malignant disease, then the surgeon will be wise in removing it.

"The operation itself is a simple piece of dissection, in which it is the best plan to secure each divided vessel in immediate succession, to prevent any great loss of blood; but it must be confessed that this is not absolutely necessary, as the operation does not require much time in its performance, and the vessels can be compressed by an assistant, whilst the surgeon is removing the tumour; or, if he prefer it, each vessel may be secured in a ligature, as the operation proceeds.

"When the tumour requires removal for this disease, it is necessary to take away all the hardened and swollen parts of the breast, for they have cysts, or cells, formed in them; and if any cyst be suffered to remain, it will still continue to grow, and the remaining part of the breast to form an Hydatid tumour." 26.

It is a great consolation to know that this disease does not contaminate other structures in the neighbourhood. Numerous cases in illustration of the foregoing observations are detailed by our author; but of these we can only notice one or two.

#### CASE VIII.—LADY HEWETT, ETAT. 60.

In November 1815, Lady H. fell against a chair, and some weeks afterwards felt uneasiness in the right breast, extending to the axilla. In January 1816, she discovered a small tumour in the same breast, just below the nipple. By the middle of the year the tumour was the size of a melon, and she was sent to Harrowgate, where she applied leeches every day for two months—and afterwards every second day till September. Pressure was next employed by means of bandages and machines, but without advantage. The swelling increased, and it was left to nature till November 1817, when it began to undergo a change. It increased quickly and became soft at its upper part, apparently suppurating, but matter did not form, though poultices and fomentations were applied. An operation was then determined on, which our author performed on the 10th of June, 1818.

"The swelling was of great size, weighing nine pounds. It was in part solid; in some

parts evidently contained a fluid; and upon the surface of the cyst part there was a slight blue tint. The swelling was moveable, and reached to the upper part of the abdomen. Lady H.'s general health was good.

"The first steps of the operation consisted in making a puncture into the tumour at its most prominent part, and discharging a quantity of serum from it; by which it was at once clear the disease was of the Hydatid kind, and the magnitude of the swelling was lessened.

"An incision was then made across the tumour, a little above its middle, and the flap of the integuments being raised, the upper part of the swelling was detached from the pectoral muscle, and with the handle of the knife the swelling was further separated; and a flap of skin being left below to meet that at the upper part, the operation was then concluded. Its removal was borne with great fortitude. Two arteries of considerable size required to be secured. The integuments were brought together by a single suture, and by adhesive plaster. On the 16th of June the wound was first dressed, and on the 30th Lady H. was quite well." 34.

We understand Lady Hewitt is now in good health at the age of 71. The removed tumour forms the subject of the second plate. A section is made through the tumour, and it is seen to be composed of a solid fibrous material, (coagulable lymph,) in which there are cavities containing hydatids. This is a splendid plate, and highly illustrative of the subject.

#### CASE XII.—CELLULOUS HYDATIDS WITH SCIRRHOUS TUBERCLE.

This was an unfortunate case. The patient was a Miss S——, of Canterbury, aged 29 years, apparently healthy, but of thin and spare habit. Twelve months prior to consultation she perceived a small swelling in her left breast, attended with a sense of aching on pressure. When she had a cold on her, she experienced a thrilling pain, with darting in the part, and a sense of soreness in the nipple. The swelling increased, together with the pain and tenderness, and, on the 20th November, 1822, she came to London to undergo an operation. The tumour was now very hard, and impressed Sir Astley's mind with the idea of its being a scirrhus tubercle. Still her youth, health, and the fulness of the breasts, induced a hope that it might not be malignant. The operation was performed on Saturday, the 23d November. The tumour was deeply buried in the breast. On the succeeding Tuesday she had a rigour, succeeded by erysipelas, from which she narrowly escaped. Upon dissection of the tumour, it had the appearance of scirrhus tubercle at its upper part, while, at the lower, there were found several cellulous hydatids, as may be seen in the first plate. In about twelve months the disease returned, and the patient ultimately died of deeply ulcerated cancer, in the year 1826.

The second species of hydatid disease in

the breast is of a very curious nature, and cannot be quite clearly understood without reference to the plate. The tumour was taken from the breast of Mrs. King, of Charing Cross, and the following graphical description we shall give in the words of the author.

"The breast was, in this case, enlarged, and in the greater part hardened by the effusion of fibrine (coagulable lymph) in lobes into the cellular tissue; but in several parts it contained bags of serum, and formed fluctuating cysts of various sizes. In each of these cells there hung a cluster of swellings, like polypi, supported by a small stalk; and the little pendulous projections appeared to float in the fluid which had been produced around them in the different cysts.

"Many Hydatids were found in a detached state, both in the fluid within the bags, and in the solid effusion in the breast; and taking the whole tumour, vast numbers of them had been formed in it.

"Their size varied, but the largest did not much exceed that of a barley-corn, the figure of which they assumed.

"In general they were of an oval form, or I ought to say oviform, as they were larger at one end than the other.

"When opened, they were found to be composed of numerous lamellæ, like the crystalline humour of the eye, or like the layers in the onion, which could be readily peeled from each other.

"When removed from the breast, they had a pearly appearance, and the laminated character of pearl internally.

"The cyst in which they were contained was a perfect bag, and it was composed internally of a membrane which was highly vascular, like other secreting surfaces; and the solid part surrounding the cyst had a greater number of vessels near the bag than at a remote distance from it; but the whole of the diseased structure was endowed with great vascularity, as will be seen in the plate.

"Upon examining Plate the 4th, seven of these bags will be seen with clusters of pendulous tumours growing in them, connected by the stalks, which are delineated in Plate the 3d, and which contains sections from the same breast. Single Hydatids will be seen in the diseased solid structure, as well as cells containing a number of these bodies; and in one the cell is emptied, to show its vascularity.

"It is doubtful if these structures are not of the nature of globular Hydatids, (which is the next I shall describe,) and which have perished from the pressure of the solid matter with which they are surrounded; or whether they are productions, or secretions of the arteries of the part: but the determination of this point must be left to future observation and diagnosis." 42.

In its external characters this disease resembles the first species described—the absence of tenderness common to both, will distinguish it from the simple chronic disease of the breast. From the former species of hydatid

disease it cannot be discriminated. Extirpation is the only mode of relief; for no constitutional remedy can check the progress of the disease. A puncture of the cyst gives temporary relief—but the extirpation is free from danger, and by it the patient's mind is secured from future apprehension.

"Mrs. King, of Charing Cross, ætat. 58, had an enormous enlargement of her left breast, which she first discovered fourteen years ago, and then supposed it arose from a blow. When she first observed it, its size was that of a marble; it felt hard, and was unattended with pain.

"It appeared to be buried in the substance of the breast, and was not very moveable in the glandular structure. It increased gradually until two years ago, by which time it had acquired the size of a melon. At that period it seemed to increase suddenly, and to grow faster than before; but it was still unattended with pain, and her general health did not appear to suffer.

"Last Christmas it again suddenly increased; but was still devoid of any painful sensations, excepting that sometimes when she had a cold, she felt a slight uneasiness in the part.

"On the 30th of September, 1822, I first saw her, and the tumour then measured thirty-five inches in circumference; in the greater part it was solid, but in other parts it was soft and fluctuating, and one bag evidently contained a large quantity of fluid.

"The solid portion of the tumour was placed at its upper part; the fluid occupied the lower part of the swelling. Her general health was good, but she suffered much from its weight drawing down the skin and pectoral muscle, and putting the nerves exceedingly upon the stretch.

"On the 1st of October I removed the tumour in the presence of Mr. Key, of Guy's Hospital, and Mr. Lavies, a Surgeon in Westminster.

"The large vessels, divided in the operation, were immediately secured, or compressed by an assistant as soon as divided, so as to prevent any loss of blood in the operation.

"The wound, when dressed on the seventh day, appeared healthy. The irritative fever consequent upon the operation was very slight, and she recovered without any untoward circumstances." 45.

### THIRD SPECIES OF HYDATID.

This is the animal or globular hydatid, consisting of a bag containing a fluid, having no vascular connexion with surrounding parts, and producing within its interior a multitude of bags similar to itself. There are few parts of the body in which hydatids have not been found, but the liver, ovaria, brain and cellular structure in the lower part of the abdomen, are the most frequent seats of this parasite animal.

In the human breast the hydatid is contained in a cyst, formed (so says our author) by the adhesive process—"for, wherever it is

deposited, it excites irritation, and becomes surrounded and encased by an effusion of fibrine which is highly vascular, and its internal and secreting surface is directly applied to that of the hydatid, a slight moisture existing between them, they having no vascular connexion." In the mamma Sir Astley has only seen these hydatids exist singly, but in other parts of the body multiplied. The following anatomical notices accord with the observations of Rhudolphi, Laennec, and other modern anatomists.

"It has no opening or inlet, so that it must derive its nourishment by absorption from its external surface. It is composed of two coats; the external is of considerable density, and if any opaque body be placed behind it, it has the shining appearance of mother of pearl, and reflects the rays of light from its surface.

"It possesses a considerable share of elasticity, and rolls itself up when it is broken.

"This external layer is lined by a very delicate internal membrane, which appears to be its uterus; for from its interior a multitude of small Hydatids grow, which at first adhere to the membrane, but afterwards become detached, from its falling into the fluid which the Hydatid contains.

"If therefore the fluid contents of the Hydatid be collected in a glass, an immense number of small Hydatids will be discovered floating in them.

"Each of these small bags becomes in its turn a parent Hydatid, producing young upon its internal surface, in a similar manner to the parent cyst.

"I am induced to believe them to be distinct animals; first, because they have an existence and growth of their own, having no vascular connexion with the part in which they are found, but being only incased and surrounded by a vascular and secreting cyst.

"Secondly, because they have the power of producing upon their interior surface their own species.

"Thirdly, that in the brain of sheep a similar bag is found, which, for several hours after the sheep has been killed, if it be put into warm water, has a distinct and very considerable vermicular motion; and fourthly, because on the surface of the abdominal viscera, and sometimes in their interior, an Hydatid is found with a mouth and neck added to it; and consequently receives its food through the mouth, like other animals.

"The globular Hydatid, therefore, may be considered, as to its mode of nourishment, the link in the creation between the animal and vegetable, as it receives its nutriment by absorption, as the vegetable does; but the *tænia hydatigina*, as it is called, which has a mouth, is a perfect animal, with respect to the manner of its nutrition.

"The Hydatid is supposed to be deposited in the structure in which it grows, carried there by the blood. Into whatever part it is thrown, it excites irritation, and becomes enclosed by an adhesive process, and which forms the cyst in which it is enveloped; but

their origin is obscure, and the opinions respecting their deposition hypothetical.

"The parent Hydatid is supported by a secretion from the internal surface of the cyst in which it is found; but the small Hydatids in it are probably nourished by the fluid which the parent Hydatid contains, so soon as they drop from, and cease to be connected with the parent cyst.

When one of these Hydatids is produced in the breast, an inflammation is excited by it, and a wall of fibrine surrounds it; it feels hard, and from the small size of the Hydatid a fluctuation cannot be discovered; but as the hydatid grows, although the quantity of solid matter increases, yet as the fluid in the Hydatid becomes more abundant, a fluctuation in the centre of the tumour may be ultimately perceived.

"Sometimes, when the Hydatid has considerably enlarged, it produces a suppurative inflammation; and when the matter is discharged, either by the lancet or by ulceration, the Hydatid escapes at the opening; and there is in the collection of preparations at St. Thomas's Hospital, an Hydatid which was thus discharged by ulceration from an abscess in the breast." 49.

The treatment of these hydatid tumours consists in making an incision into them, and discharging their contents, after which a simple poultice is sufficient to heal the wound. If the fluid re-accumulates, a seton must be passed into the bag, and the sac will slough. When the fluctuation escapes notice, and the surgeon removes the tumour, suspecting it to be of a scirrhus nature, then the hydatid is found, and the surgeon may confidently assure the patient that she is perfectly free from future danger. The distinguishing marks of this disease are its central fluctuation, its solid circumference, and the absence of tenderness on pressure. The disease is not dangerous prior to the operation, nor is this last followed by any bad consequences. There is a very good plate of the globular Hydatid, furnished by the case of Mrs. Sarah Cornish, for which the author is indebted to Mr. Bayfield, Surgeon.

#### CHAP. IV. CHRONIC MAMMARY TUMOUR.

This disease generally attacks young persons, from the age of 17 to 30 years, the constitution being generally healthy at the time, and during the progress of the disease. Sir Astley considers it as usually the result of sympathy with the uterus—"the excitement of the one organ leading to an increased determination and action in the other, and thus a new growth is produced." It occurs chiefly in single women, or in the married who have had no children.

"The symptoms which accompany this swelling are, that it grows from the surface of the breast rather than from its interior, and it therefore generally appears to be very superficial, excepting if it spring from the posterior surface of the breast, when it is deep-seated,

and its peculiar features are less easily discriminated.

"It is an extremely moveable swelling, being chiefly attached by a portion of tendinous aponeurosis to the glandular structure of the breast, rather than buried within the gland; and therefore when moved, it glides over the surface of the breast.

"It begins without pain, and is therefore accidentally observed in the patient's ablutions; and it often continues for many years without exciting pain, or producing inconvenience; but in some cases it does become painful; the uneasy sensation extends to the shoulder, and the patient describes it to be of an aching or rheumatic kind.

"Generally it is not tender to the touch; but I have known it occasionally so, more especially before the patient is unwell at her monthly periods.

"Its growth is extremely slow, for I have removed one which had existed for five years, and which was not larger than a walnut; and I have seen another which had been growing seven years, and was but little larger than the former." 52.

On dissection, the disease is found to be contained in a bag formed of a similar fibro-tendinous structure to that which envelops, as well as occupies the interstices of the glandular part of the breast;—and, in proportion to the magnitude of the tumour does this envelope become more and more distinct. It grows from the glandular structure of the breast, and remains connected with it by a thin process of a similar structure, which is loose and moveable. When laid bare, it appears to be composed of large lobes, like those of the breast; but when more completely unravelled, it is found to be composed of smaller and smaller lobes, similar in form, but differing in magnitude; and, after a short maceration in water the lobes are easily separated. The impression made on the mind during the dissection of the tumour is, that nature has formed an additional portion of breast, composed of similar lobes, but perhaps differing in structure by the absence of lactiferous tubes.

These tumours rarely acquire any considerable magnitude, weighing generally from one to four ounces. Mr. Bond, of Brighton, however, removed one which weighed a pound and a half, a size and weight which it acquired in two years. They are free from malignancy, and may exist many years stationary, disappearing after all. Upon a nice manipular examination of this tumour, it is found to be lobulated—that is, composed of a number of lobes connected together, but leaving depressions between them, and still preserving this conglomerate character, whatever size it may attain. The swelling might be termed the "lobulated mammary tumour." The general discriminating marks of this disease are as follow:—

"First, the youth of the patient: there are, however, some exceptions to this rule; but as the scirrhus tubercle is rarely seen under

thirty years of age, so does this disease seldom happen after thirty.

"Secondly, the absence of pain, but this also is not constantly observed, although it is generally slight, and often the swelling exists many years without it.

"Thirdly, from the malignant diseases of the breast it is distinguished by the general health in this complaint remaining unaffected.

"Fourthly, the slow progress of the swelling, and the number of years it will exist in almost a stationary state.

"Fifthly, in its superficial situation upon the surface of the breast; for it is placed rather on the gland than in it.

"Sixthly, from its extreme mobility.

"Seventhly, above all, it is known from its lobulated feel; being distinctly composed of numerous lobes conglomerated into one mass, with a broken or divided surface.

"The cause of this disease is, as I have stated it to be, sympathetic with the uterus, and it arises from a great determination of blood to the part at certain times; but patients frequently ascribe it to a blow which they recollect to have received, or to the continued pressure of stays; and these circumstances of irritation may become the immediate exciting causes of the tumour, but the tendency to the disease is founded in uterine excitement.

"In the treatment of this complaint, it is right to learn if all the secretions be perfectly performed—if the liver secrete its proper quantity of bile—if the bowels be costive; but, above all, if the menstrual secretion be regularly performed, as regards its time, its quantity, its colour, and its duration.

"If the digestive functions are imperfectly performed, the pil. hyd. sub. comp. at night, and the infus. calumbæ cum infus. rhei. et sodæ carbon. twice in the day will be the best medicine; but if the uterine secretion be defective, the pil. hydrargyri gr. ij. extr. colocynthidas compositi, gr. iij. ft. pilula, given every fourth or fifth night, with different preparations of steel, to be taken two or three times per diem, will be the more appropriate constitutional remedies.

"As to local applications, one of the best is the emp. amm. cum hydrargyro, if the diseased part be completely indolent; or the iodine ointment may be applied by friction upon the swelling, to excite the action of the absorbent vessels.

"But if there be heat or pain in the swelling, evaporating lotions, or simple poultices, are most productive of relief.

"It must be confessed, however, that these swellings are much out of the medical man's power to relieve, either by constitutional or local means; for as they are growths of long continuance, so will a great length of time be required to produce their absorption; and when they disappear, they seem to do so very gradually, from the cessation of that uterine excitement by which they have been produced, or by the part being called upon for its natural secretion of milk.

"But when the patient consults the sur

geon, she is very apprehensive of a cancerous or malignant disposition in the tumour; and he has the power of relieving her mind by the following declarations, which time will verify.

"First that the disease is decidedly not malignant; and therefore if it do not yield to treatment, it is not dangerous to life.

"Secondly, that it does not absolutely require an operation; for it will continue for years, and then gradually disappear.

"Thirdly, if the patient be anxious to have the malady removed, from an apprehension of its becoming malignant, and if she determine to have it done, the operation is of the simplest kind; and it is not followed by any serious symptom, immediately or remotely; nor is the disease liable to recur." 57.

Single women having this disease are very apt to inquire of the surgeon if they may marry. Sir Astley's reply has always been, that marriage would be beneficial. This answer may also be given to the future husband, if consulted by him, which is sometimes the case. The disease often disappears during lactation, and does not prevent pregnancy. Numerous cases are detailed by our author, in illustration of the description, pathology, and surgical anatomy here laid down, and for which we must refer to the work.

#### CHAP. V.—THE CARTILAGINOUS AND OSSIFIC TUMOUR.

In chronic and specific inflammations of the mamma, a gelatine is sometimes effused, resembling that which supplies the bones in the fœtus, and parts of the bones in infants. This gelatine becomes vascular—ultimately resembles cartilage—and forms a nidus for bone. One case is detailed in illustration of this disease, of which a plate is also given. The following is the case.

"Mary Farmer, aged 32 years, applied to me for a swelling in her breast, which she had observed for fourteen years.

"The pain in it was very severe; the skin which covered it felt very warm when compared with the surrounding parts; and it required the constant application of evaporating lotions to moderate its warmth. The tumour was excessively hard, very painful before menstruation, but greatly relieved after it.

"Various applications were tried, *viz.* fomentations, poultices, and stimulating plasters, but they neither disposed it to absorption nor to suppuration; and as all the means employed to disperse it were quite unavailing, she was anxious for its removal.

"The glands in the axilla being free from disease, as the complaint had existed for so long a period, and her general health seemed to be perfectly good, I recommended the operation, as affording the only hope of cure.

"Upon examination of the swelling after its removal, the larger portion of it had the appearance of that cartilage which supplies the place of bone in the young subject: the remaining part was ossific." 65.

#### CHAP. VI.—ADIPOSE TUMOUR.

Sir Astley has had two occasions to operate for the removal of these unwieldy masses. In the first case, the tumour began at the posterior part of the breast, and grew between the gland and the surface of the pectoral muscle. In the second, all those lobes of fat, which are interspersed between the different portions of the mammary gland, became enlarged, and formed a swelling which, prior to incision being made, seemed to involve the whole of the glandular structure of the breast. But when the operation was performed, the different lobes of adeps which formed the tumour, could be drawn away from the gland itself. One of these cases we shall give in the original.

"Mrs. Smith, of Great Yarmouth, Norfolk, was admitted into Guy's Hospital in August 1805, for an enormous tumour in the left breast: its circumference was thirty-one inches, and its length ten inches and a half. It was removed August the 29th, by making, first, a semicircular incision at the anterior and upper part of the tumour, and then drawing down the swelling; an incision was made along its upper part until the pectoralis muscle was exposed, from which the tumour was afterwards dissected from the upper to the lower part, its own weight drawing the cellular membrane to great extent, so as to render its detachment easy. As the different vessels which supplied it were cut through, the fingers of an assistant were applied upon them, and very little blood was lost in the operation; but in order to complete it, a very large portion of integument, the whole of the breast, and the tumour which was situated behind it, were removed. Several sutures were used to approximate the edges of the skin, which were also brought together by means of adhesive plaster; and the patient soon recovered.

"The tumour, which is preserved in the collection at St. Thomas's Hospital, weighed 14 lbs. 10 ounces." 67.

#### CHAP. VII.—LARGE AND PENDULOUS BREAST.

The glandular structure of the mamma sometimes grows to an enormous size, becoming extremely pendulous, so as to reach the fore part of the abdomen. This is not the effect of relaxation—but an absolute growth of the secreting lobes, enlarged, and occasionally very tender. The most remarkable case of this kind was sent to Dr. Babington, and our author, from Pembrokeshire, the young lady handing to Sir A. the following letter.

"SIR,—I am induced to request your advice in the case of Miss —, who about three years ago was first affected with an enlargement of the left mamma, which continued increasing; and the right breast then began also to enlarge, until they attained their present dimensions. She is now fifteen years of age, and of good general health: the catamenia appeared about twelve months ago. I

was requested to see her last winter, in company with Mr. Gregory, of Milford, and she has taken various emmenagogue medicines and gentle laxatives; and she was enjoined regular exercise and sea-bathing. The catamenia returned at three or four regular intervals, at which time the mamma considerably decreased in size; but since May last, the periods have been very distant, and the discharge is very small in quantity.

"The mammae are now of extraordinary dimensions. The circumference of the left is twenty-three inches and a half, and that of the right is twenty-two inches, and they are pendant like a pear, as the neck is comparatively narrow. I cannot perceive any tumour, either in the breast or in the axilla. The skin feels and appears to be natural. Her appetite is good, and the bowels are kept regular by occasional doses of neutral salts. She suffers no pain whatever in either mamma, but she does not appear so lively as girls of her age, but indeed, on the contrary, is heavy and dull. In other respects there is nothing peculiar in this young lady's case.

"I am, Sir, your obedient servant,

"W. D. JONES.

"The local treatment of this case consists in the application of a suspensory bandage from the back of the neck, under each breast, to produce artificial support; and the principle which is to be observed in the constitutional treatment of this malady, is to increase and support the menstrual secretion; and for this purpose the exhibition of different forms of steel united with aloes, will be found the most efficacious medicine.

"The ferrum ammoniatum—the *mistura ferri composita*—the carbonate of iron, will be the forms of steel which, united with aloes, will be most beneficial; and if the biliary secretions be defective, the *pil. hyd. sub. comp.*, or the *hyd. cum creta*, will be the best medicines." 71.

Women who have led a life of celibacy to the age of 30 or 35 years, whose menstrual secretion has become very defective, and who are subject to severe fluor albus, are liable to have their breasts enlarged, not pendulous, each lobe of the gland being distinctly felt, moving freely, one on the other. Both breasts are affected; but one generally more than the other, accompanied with occasional pain, especially at the menstrual period, the catamenia being slight, pale, and of short duration. The breast, after being sometime enlarged, begins to waste; and, in a few years, it is in a great degree absorbed. The treatment consists in restoring, if possible, the menstrual secretion by the means already alluded to, and by the use of the warm hip-bath—by the local application of leeches where there is pain, and by the *emplastrum ammon. cum hydrarg.*

#### CHAP. VIII.—SCROFULOUS SWELLING OF THE BREAST.

In young women who have enlargement of the cervical glands, scrofulous tumours some-

times, though rarely, form in the breasts, unattended by pain—are distinctly circumscribed—very smooth on the surface—and scarcely tender on pressure. They are indolent, varying with the state of the constitution, diminishing as it improves, and increasing as it degenerates. They can only be discriminated from the simple chronic inflammation of the breast by the absence of tenderness, and by the existence of other diseases of a similar kind in the absorbent glands of other parts of the body. They are unattended with danger, never degenerating into malignancy. They require no operation—though our author has seen amputation performed from ignorance of the true nature of the disease.

"The treatment in this case consists in improving the constitution by a warm and dry atmosphere—by an equally regulated temperature—by tepid sea-bathing—by gentle and regular exercise—by animal food of the most digestible kind—by milk—and by a farinaceous diet—a diet which shall nourish without exciting feverish heat, or calling much upon the powers of digestion.

"The best medicines are carbonate of iron and rhubarb; the *hyd. cum creta* with rhubarb; a grain of blue pill, and two or three grains of quinine; infusion of calumba with rhubarb and soda; for I conclude it will be admitted by every one who deserves the title of a surgeon, that we possess no specific remedy for this disease, but that we are required to assist the digestive powers, make better blood, and convey it to the system by an increased vigour of the constitution.

"Local treatment avails but little: a stimulating plaster or a lotion to the tumour, when the health is improved, may excite the absorbents to remove it." 75.

#### CHAP. IX.—IRRITABLE TUMOUR OF THE BREAST.

The mamma is liable to become irritable without any perceptible swelling, as well as to form an irritable tumour, composed of a structure unlike that of the gland itself, and apparently of a specific growth. In the great majority of instances it occurs between the ages of 16 and 30 years; and never, as far as our author has observed, before the age of puberty.

"When the complaint affects the glandular structure of the breast, there is scarcely any perceptible swelling, but one or more of its lobes becomes exquisitely tender to the touch; and if it be handled, the pain sometimes continues for several hours. The uneasy sensation is not confined to the breast alone, but it extends to the shoulder and axilla, to the inner side of the elbow, and to the fingers; it also affects that side of the body even to the hip; the patients cannot sleep on that side, and the pain is sometimes so severe as to prevent even their resting on the diseased side; and the weight of the breast in bed in some instances occasions intolerable pain.

"Patients also state that heat and cold fre-

quently succeed each other in the breast; and it would seem the pain resembles that in the *tic-douloureux*, darting like electricity through the part, and through the neighbouring nerves. When the pain is most severe, the stomach sympathises, and vomiting is produced. The suffering is very much increased prior to menstruation; is somewhat relieved during the period, and decreased after its cessation. There is no external mark of inflammation, as the skin remains undiscoloured.

"In some cases only a small portion of one breast is affected; in others the whole, and not unfrequently both of the breasts.

"This painful state remains for months, and even for years, with little intermission; but it has no malignant tendency: and an operation, where there is no distinct tumour, must be entirely out of contemplation.

"Besides this irritable and painful state of a whole, or part of the breast, a tumour sometimes is found distinctly circumscribed—highly sensitive to the touch—acutely painful at intervals, more especially prior to menstruation—very moveable—often not larger than a pea, seldom exceeding the size of a marble: generally one only exists, but in other cases there are several similar swellings." 78.

Although they continue for years, they vary but little in size. Sir A. has never seen them suppurate—they sometimes disappear spontaneously. Upon dissection they are found to consist of a solid and semi-transparent substance, with fibres interwoven in it, but without any regular distribution. He has not been able to trace any filament of nerve into them. They seem to be productions of the cellular membrane of the part rather than of the glandular structure. The diagnosis is not difficult. The pain—the tenderness to the slightest touch—the suffering which succeeds examination; these distinguish it from the *hydatid*, the chronic mammary tumour, and the *scirrhous* and fungous tubercle. The disease is met with in persons of an irritable and nervous temperament, in whom there is excessive irritability of the system, accompanied with diminished power. The menstrual secretion is generally very deficient—in a few cases morbidly copious—very rarely perfectly regular. The *fluor albus* is a frequent concomitant of this complaint. The patient generally traces the disease to some blow, or injury from pressure on the part. The treatment consists in lessening the irritability of the system—in lulling the local suffering—and in restoring the defective or diminished menstruation. The best local remedy is the application of a plaster composed of equal parts of soap cerate and extract of belladonna; or a poultice with solution of belladonna and bread. Oil-silk worn on the breast, or a hare-skin, or some other fur, by exciting perspiration, aids in soothing and tranquillizing the part. Leeches may be applied when the pain is excessive, but if too frequently used, they induce debility, and increase irritability. As constitutional remedies, calomel,

opium, and conium should be given for a time, with an occasional aperient, and then the following is recommended by our author.

R Extr. Conii. — Pap. āā. gr. ij. — Stramonii. (e Semin.) gr. ss. Misce fiat pilula bis terve in die sumenda.

The half grain of stramonium is sometimes too strong, and may be diminished. To restore the uterine secretion, Sir A. recommends the *carbonas ferri*, the *ferrum ammoniatum*, or the *mistura ferri composita*, combined with aloes. The hip-bath at 100 or 105° is beneficial. No operation is necessary.

#### CHAP. X.—ECCHYMOSES OF THE BREAST.

Allied to the irritable breast is a bruised appearance in this organ, occurring at each menstrual period, and accompanied with exquisite sensibility, pain, and tenderness.

"The symptoms of this complaint are as follow:—It occurs in girls who are in most instances under twenty-two years of age. It is preceded by severe pain in the breast and arm. The extravasation of blood begins a few days before menstruation, and it appears principally in a large spot, as if a severe blow had been inflicted. Smaller and less vivid spots may also be observed in other parts of the breast: it is sometimes a concomitant of an unusually large bosom. The part is exquisitely tender to the touch, and the pain with which it is accompanied, passes down along the inner side of the arm to the ends of the fingers. It disappears a week after menstruation, in some cases; but in others, when it is more severe, it continues until the next time the patient is unwell. It looks like the *ecchymosis* which often succeeds the application of leeches; or like the extravasation of blood under the skin, which occurs in the arm after bleeding, when the opening in the skin has been smaller than that in the vein.

"It is a curious occurrence, strikingly showing the strong sympathy which subsists between the uterus and breast; for it is evidently the effect of the great determination of blood to the bosom just prior to the period of menstruation; and it indicates excessive irritability of the constitution, as well as the great delicacy and debility of the blood-vessels, which are unable to support this sudden determination which such sympathy produces.

"This complaint is entirely unattended with danger; but being accompanied with diminished, irregular, and sometimes profuse uterine secretion, and by considerable debility and irritability of the constitution, two objects must be kept in view in its treatment:—the one is, by different forms of steel medicines, to increase the quantity, and render regular the menstrual discharge; and the other, to augment the strength of the system, by the infusion of roses with sulphate of quinine.

"As to local treatment, the best application is the *liquor ammoniæ acetatis*, with spirits of wine, in the proportion of five ounces of the former, and one of the latter."

Several cases are detailed in illustration, but these we need not dwell on.

We have now exhibited a very full analysis of the letter-press of this valuable volume; but the plates constitute, of course, the most important portion of the work, and are admirably executed. Every surgeon of respectability in the profession will place these plates in his library, for constant reference, when the subject of mammary diseases is under his consideration. In respect to the description, pathology, and didactic precepts contained in the letter-press, we hope we have done some service to the great mass of the profession by wide circulation of them in every direction. We shall look with great interest to the second part of the work, embracing cancer and other malignant diseases of the human mamma.

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From the Medico-Chirurgical Review.

**RESEARCHES INTO THE CAUSES, NATURE, AND TREATMENT OF THE DISEASES OF WARM CLIMATES.** By JAMES ANNESLEY, Esq. Two Volumes, 4to. 1827-8.

**CHRONIC HEPATITIS, AND ORGANIC DISEASES OF THE LIVER.**

Of all the diseases to which Europeans are particularly prone in tropical climates, **CHRONIC HEPATITIS** is the most interesting to the **HOME DEPARTMENT** of medicine in the British Isles. When the liver has taken on this form of disease, the invalid generally returns to Europe, where he continues to be, at once, a plague and a profit to every practitioner within his reach during the remainder of his life. As for Cheltenham and Leamington, their very streets are paved with the pagodas that have been purchased in the East at the expense of health in the West! But this is not all. It is suspected—nay, it is truly affirmed, that **LIVER DISEASE** is transmitted to the offspring of the **ANGLO-INDIAN**, with as much certainty and facility as pulmonary tubercles, gout, or mania. And why should not the hereditary disposition be transmitted in the one case as well as in the others? No reason to the contrary can be assigned, while observation is in favour of the affirmative side of the question. Considering the prodigious influx of oriental and occidental invalids annually into this country, most of them labouring under chronic disease of the liver, the evil would be most alarming, did not the nature of our cold and gloomy climate check the hereditary propagation of hepatic diseases, in the same way that the bright skies and fervid atmospheres of the Eastern and Western Indies retard the progress, or annul the propensity to pulmonary phthisis. But still the class of maladies under consideration is quite extensive enough to render its investigation a matter of very great importance among all classes of the profession in this country.

Few have had more ample opportunities of seeing the disease under consideration, on a large scale, than the author of the great work now before us; and, therefore, we propose to give a very full account of this portion of the publication, interspersed with original and collected information, wherever we see an opportunity for its introduction.

Chronic inflammation of the liver may occur as a primary disease, or take place as the sequel of acute disease.

"When chronic inflammation takes place primarily, it generally is seated in the internal texture of the organ, and often gives rise to but few local symptoms, and but little constitutional disturbance. But chronic is a term which conveys with it no precise idea, and merely signifies a slow state of inflammatory disorder, presenting every grade, from that state of disease which may be considered as only slightly deviating from the healthy action, and which may continue for a great length of time, giving rise to various organic changes, to that which runs its course rapidly, and terminates, either one way or another, in a very few weeks. When this form of inflammation remains after the more acute phenomena have been subdued, it has generally its seat in the substance of the liver, but not uniformly: it may be seated in the surfaces; for the active inflammation, which has been followed by the effusion of coagulable lymph upon the surface of the organ, and the formation of adhesions between it and adjoining parts, may be, to a certain extent, rekindled, after it has been altogether or nearly extinguished, and the vascular action reinduced may assume a slow and sub-acute form. It should also be recollected, that, although chronic inflammations of the liver may follow upon acute attacks, the latter may also supervene to the former, and actually do so on many occasions, particularly when the patients have been exposed to energetic exciting causes, or to an injudicious regimen and treatment. This should always be kept in mind during the treatment of both acute and chronic forms of inflammation of the liver; for it should be an object of importance with the practitioner to prevent active inflammation from degenerating into chronic, and the chronic from being converted into active disease." 470.

Chronic inflammation of the organ in question generally commences with, and must necessarily be accompanied by, deranged function of the same. The biliary secretion is either depraved in quality, or its flow into the duodenum obstructed. It is seldom in due quantity, though occasionally it seems over-abundant—a phenomenon which our author thinks is owing to a previous impediment to its free egress from the liver. The diminution of the biliary secretion, upon the whole, predominates, as may be inferred from the appearance of the feces, and the defective state of the digestive and assimilative functions.

As chronic disease of the liver varies, in grade, from active inflammation, down to the most trifling deviation from healthy function,

we may readily conceive the great variety of symptoms which must present themselves, and the utter impossibility of delineating them all. Add to this, the complication of stomach disorder, intestinal irritation or torpor, nervous derangement, &c. which almost invariably accompanies the hepatic affection!

"The loss of flesh; the dyspeptic symptoms, particularly the slow and painful digestion, accompanied with acid and acrid eructations, flatulency, nausea, and sometimes vomiting, torpid state of the bowels, or dark-coloured, offensive, slimy, greenish-coloured, tenacious, or watery and muddy motions; the frequent calls to stool, and the scanty and morbid state of the evacuations; the dark-coloured and disordered condition of the urine; the distention and oppression at the epigastrium and right hypochondrium; the occasional aching pain and weight in these situations; the uneasiness and pain about the right shoulder or shoulder-blade; the slight acceleration of the pulse towards evening, with an irritable heat, and considerable heat and restlessness through the night; the burning heat of the palms of the hands and soles of the feet in the evening, and chilliness in the morning; the white, foul, and excited tongue; the bitter or disagreeable taste of the mouth; the hardened state of the gums; the sallow and tallowy appearance of the countenance, and either yellow or pearly-white colour of the eye; the sickly and leuco-phlegmatic character of the body generally; and the elevation of the shoulders,—are the principal symptoms by which we are guided in determining the existence of chronic inflammation of the internal structure of the liver." 472.

It is when any of the surfaces of the organ are engaged in the inflammatory process, that pain is more complained of. When the *convex* surface is implicated, the pain is more referred to the chest—when the *concave*, to the stomach and bowels. In every case, there should be instituted a careful examination of the parts by the hand and the eye. The manual examination should be conducted with gentleness, and no unnecessary pain excited, lest chronic inflammation may be kindled up into an acute form.

The terminations of chronic hepatitis are various. The greater number of them may be looked upon as advanced stages of the inflammatory state—others merely as organic changes to which this state invariably leads in particular habits and constitutions. The chief organic changes met with in the east, consequent upon chronic inflammation of the liver, are the following:—

"Collections of matter may form in the substance of the organ consequent upon chronic inflammatory action, as well as from the more active state of disease. When the purulent matter is collected into one large abscess, it generally nearly approaches the appearance of abscess consequent upon active inflammation, and will receive attention when the subject of abscess comes specifically un-

der consideration. Not infrequently, however, very minute abscesses are scattered through the substance of the liver, both with and without the appearance of a distinct cyst, the matter collected being of a firm or cheesy consistence, and yellowish white colour. Sometimes this consistent kind of matter does not fill completely the cavity containing it: it seems as if the watery portions of the matter had been removed by absorption, and thus the more consistent part fills imperfectly the cavities in which it is contained. The substance of the organ intervening between the purulent deposits is sometimes more vascular than usual, and of a brick-red colour: and at other times not materially changed from the healthy colour and consistence.

"The liver, in many instances of long-continued and slight inflammatory action, becomes much enlarged, particularly its right lobe. This appears to arise from the deposit of lymph in the interstices of the structure, which deposit becomes dense, and closely resembles an organized substance, most probably from the absorption of its watery portions. The enlargement is often accompanied also with deposits of purulent matter in various parts of the organ, with a friable state of its texture, and a dark-coloured and congested condition of both its internal structure and surfaces: the latter are generally much darker than natural, and often variegated with lighter streaks and small spots.

"When the deposition of lymph in the structure of the liver is attended with greater density of its organization, either partially or generally, the change has been ascribed to a specific organic change; and a true scirrhus condition of the organ has been considered as the result. This state seems to us to be merely the consequence of very slow inflammatory action, with a deposit of organized matter, and an increased consistence of the reticulated or cellular parenchyma of the viscus, and frequently with an effusion of lymph in the granulated tissue composing the greater portion of its internal structure. It seems to us also, that the consistence of the organ met with in cases of chronic disease characterized by enlargement, is more the consequence of the activity of the inflammatory action from which it proceeds, and the habit and constitution of the patient, than any other cause; the organ being more friable and congested, the more acute the previously existing disease,—and more firm and more closely resembling a true scirrhus and semi-cartilaginous state, the more chronic or slow the inflammatory action which had existed.

"Tubercles of various kinds,—some apparently encysted, others without any evident cyst or distinct envelope, and, when divided, presenting either a concentric or radiated texture, varying in consistence from a gristly or cartilaginous state to one of semi-fluidity, occasionally filling completely the cavities in which they are contained, particularly when they approach a state of fluidity, and at other times, when their consistence is greatest, leav-

ing vacuities between their circumference and the parts of the liver surrounding them—are often severally detected in examinations of the more chronic forms of hepatic inflammations. In many cases, the substance of the liver containing these tubercular formations presents little or no evidence of much inflammatory action having existed, at least recently, in the organ. The tuberculated liver is often also enlarged, and occasionally it is much firmer in its texture than usual. When signs of co-existent inflammation of the internal structure are present, there is frequently also greater friability; but this is not uniformly the case. Sometimes the substance of the viscus presents a gristly or cartilaginous appearance, and is lacerated with greater difficulty than usual. Such appearances are chiefly remarked in the most chronic cases.

“In these cases also, more particularly in those addicted to the use of spirituous and intoxicating liquors, the substance of the liver is obscurely tuberculated, of a cheesy consistence and texture, and of a deep nankeen-like colour: it is generally, at the same time, more or less enlarged. In many chronic cases of diseased liver, arising from the above cause, we have found the internal structure of the organ of a parboiled and scabrous appearance, drier and more spongy, than natural, and, when divided by a scalpel, or torn asunder, presenting a more or less pale colour, and great inequality of consistence, small rough eminences being surrounded by soft, grayish, and spongy matter. In some of these cases, the substance of the viscus is of a grayish-brown colour. Conjoined with this condition, the size of the liver is often diminished, its vessels nearly without blood, the hepatic ducts devoid of bile, and the gall-bladder either empty or containing a small quantity of a pale, straw-coloured, watery fluid, scarcely resembling bile. The state of the hepatic vessels, biliary ducts, and gall-bladder, is often also conjoined with scirrhus enlargements, tuberculous disease, with atrophy, and with many of the other very chronic states of the liver now described.” 476.

When enlarged and tuberculated, the liver may generally be felt projecting from under the margins of the ribs, especially on the right side; “but such forms of organic change are less frequently observed in India than in Europe.” The functions of the organ are always greatly disordered, according to our author’s experience, in these cases of tuberculation, and other organic changes. The biliary secretion is diminished, and its colour unhealthy—the digestive and assimilating functions are impaired—the body wastes—there is drowsiness and pain over the eyes—bad taste in the mouth—a tallowy or unhealthy appearance of countenance—irregular condition of the bowels, with pale, morbid, and offensive stools—high-coloured urine—slight evening fever.

In many cases of very chronic hepatitis, the liver becomes *atrophied*. It is extremely difficult to pronounce upon such state, though it

may be suspected by the exceeding torpor of the biliary functions, the deficiency of bile, “and the sunk state of the epigastrium and margin of the false ribs, when the patient is in the reclining position.” These symptoms, however, cannot be relied upon.

The post-mortem appearances met with in cases of chronic inflammation of the liver are, abscess, and small collections of matter—tubercles—enlargement of the organ and softening of its texture—induration and scirrhus tumours—enlargement with friability, or cartilaginous hardening of structure—a rough, pale, and parboiled-like appearance—a cheesy and tuberculated state of its structure—a spongy and less vascular condition of its internal texture—atrophy, with or without the vestiges of cicatrices—various colorations of its surface or substance—adhesions.

The above organic changes are frequently met with in fatal cases of dysentery—especially of what is called hepatic dysentery, to be hereafter described; and in bilious remittent fevers, or obstinate intermittents. Indeed the said changes are more frequently observed as complications than as simple diseases of the biliary apparatus.

In addition to the foregoing catalogue, there are other diseases affecting the gall-ducts—as collections of viscid and inspissated bile—or, biliary calculi. The latter, however, are comparatively rare in the ducts, though often found in the gall-bladder. These obstructions and concretions produce the same phenomena in hot, as in cold climates. Inflammation of the pancreas and duodenum often extends to the concave surface of the liver, producing jaundice, and the other phenomena of hepatitis, with additional pain in the region of the duodenum, proceeding from beneath the right scapula to the right hypochondrium, with a sense of dragging or drawing together of the parts in the neighbourhood. In such states, the opening of the ductus communis will be partially or totally obstructed, and jaundice will be the consequence. It is hardly necessary to say, that jaundice can only be viewed as a symptom of some disease of the liver, or of some mechanical obstruction to the issue of bile from that organ into the intestines. It is unnecessary to say any thing of the causes of chronic hepatitis, after what has been said of the etiology of acute hepatic inflammation, in a former article. Functional derangements, however, and a vitiated condition of the bile itself, by keeping up constant irritation in the bowels, and in the system generally, are no uncommon causes of actual inflammation, acute or chronic, in the biliary apparatus. Sub-acute inflammation of the liver, if taken in time, and judiciously treated, generally ends favourably—and when the termination is fatal, it is usually by the induction of organic disease in the liver or large bowels. We shall introduce the following case in illustration.

CASE LXIII.—*Chronic Inflammation of the Liver, with Congestion and Secretion of*

*Morbid Bile; Inflammation of the small and large Intestines supervening, and terminating the Life of the Patient.—Examination post Mortem. (See Plate X.)*

"William Mac Lauren, aged 35, was admitted while encamped at Kurnool, 19th October. Is a debilitated man, from long residence in India, and from drinking the intoxicating liquors of the country. Had, a few months since, an attack of chronic hepatitis, with disorder of the bowels, from which he apparently recovered. Has been again complaining for some time of hepatic symptoms, and has now purging; passes blood by stool: great sickness at stomach, and bitter taste in his mouth; tongue foul.—Habeat haust. emet.

"*Vespere.*—He vomited a lumbricus; considerable debility.—R Aquæ ammon. ℥xx.; spirit. lavand. compos. ℥ij.; aquæ puræ, ℥jss. Ft. haust. stat. sumend. Habeat hydrarg. submur. gr. xij. h. s.

"20th.—Pulse 80, and good; tongue foul and yellow; great thirst; stools bloody, mixed with mucus, and some fæces.—Habeat ol. ricini, ℥ij. Injiciatur enema purg. statim. Habeat mist. salin. ℥ij. secundâ quâque horâ.

"*Vespere.*—Pulse 90, more languid; tongue foul; thirst urgent; stools the same as in the morning.—Cont. mist. salin. Adhibeat scrob. cord. emplast. lyttæ. R Hydr. submur. gr. xij.; pulv. antim. gr. iij.; opii, gr. ij.; syr. q. s. Ft. pilul. h. s. s. Injiciatur enema emolliens.

"21st.—Pulse the same as at last visit; tongue still foul; stools bloody.—R Ol. ricini, ℥jss.; aquæ. menth. pip. ℥ij. Ft. haust. stat. sum. Injiciatur enema. cum ipecac.

"*Vespere.*—Pulse 108; skin very moist; tongue foul and dry; stools watery, bloody, and mucous; great flatulence; no pain of the belly when pressed.—R Hydr. submur. ℥j.; opii, gr. ij.; syr. q. s. Ft. pilul. h. s. s. Injiciatur enema emolliens.

"22d.—Pulse 98, much weaker; skin agreeably moist; tongue still foul; stools liquid and bloody; some griping pain in the night; great prostration of strength.—Injiciatur enema emolliens. R Acid. nitros. ℥ij.; tinct. opii, ℥ij.; aquæ puræ, ℥ij. Fiat potus, cujus cyathum horis singulis sumat.

"*Vespere.*—Pulse frequent, and very feeble; tongue furred; thirst urgent; stools unaltered; tenesmus less severe; no pain.—Contin. pot. acid. heri præscriptus. Injiciatur enema, cum ipecac. Habeat haust. anodyn. h. s. Bibat. infus. tamarind.

"23d.—He has been very uneasy during the night, and has vomited a great deal; pulse imperceptible; skin cold, and exhaling an unpleasant odour; stools watery and bloody; no pain; he appears to be moribund.—R Tinct. opii, ℥xl.; spirit. æther. sulphur., aquæ ammon. utriusque, ℥xx.; aquæ puræ, ℥ij. Ft. haust. stat. sumend.

"*Vespere.*—No improvement of the symptoms.—Cont. med.

"24th.—The body exhales a strong cadaverous smell, and all the symptoms are worse.—Ponantur juxta lectum aceti acetabula vaporantis. He died at one o'clock.

"*Examination, two hours after Death.*—

The liver was much enlarged, and of a blackish brown colour externally, and its right lobe rose high into the right thorax, and was of a spheroid form. Upon being divided, its vessels were greatly congested with blood, and its ducts with thick, dark-coloured, viscid bile. The internal structure of the liver was more than usually vascular, of a dark brick colour, and more condensed and more friable in its texture than natural. The gall-bladder contained some green-coloured bile. The ducts were unobstructed. The small and large intestines were inflamed throughout, and so much softened in their texture, and so easily lacerated, that the ilium and colon tore upon removing them for inspection. The mucous coat was detached from the subjacent texture in many places of the colon, and in others it was sphacelated. The other organs presented no marked derangement.

"*Remarks.*—We did not see this case until symptoms of gangrene of the bowels had supervened; otherwise, notwithstanding the circumstance of the worn-out system of the patient, and his inordinate addiction to spirits, depletions would have been practised. The time for their employment soon passed off; and after the 21st, his case admitted of no hopes from any treatment. The liver presented an appearance of disease very frequently met with as a consequence of chronic inflammations of the organ, (see plate X.;) and on that account the case is inserted in this place." 483.

The plate shows the morbid appearances above mentioned in a very striking manner.

#### ABSCESS OF THE LIVER.

This termination is very common in India, if active means are not early employed in the inflammatory stage—or, if the disease creeps on insidiously, and eludes attention. The sanguine and scrofulous habits are particularly prone to suppuration of the liver.

"It may with great justice be dreaded by the practitioner, when he finds, upon examination, considerable tumefaction of the organ accompanying the early stages of the disease;—and that it frequently supervenes to the insidious inflammation of the substance of the liver, which often accompanies, if it does not actually occasion, a particular variety of dysentery, and which, although not generally manifested by acute symptoms referrible to the region of this organ, is not the less active as respects its progress and termination. Indeed, in many instances, the practitioner of extensive practice in India, will find, when the early stage of inflammation of the liver is accompanied with much fever, a heavy aching pain, and great tumefaction in the region of the organ, that it is very difficult to prevent the supervention of suppuration even by the most prompt and copious depletions, and by the most active employment of mercurial remedies. It frequently happens, also, that considerable enlargement of the liver is observed as a sequela of active disease of the viscus,

even although much decision may have been evinced in the treatment, and the most urgent symptoms have been subdued. But, in such cases, enlargement of the organ is the result of some degree of effusion of lymph in the interstices of the inflamed tissue, and denotes a similar state of parts to that marking the previous existence of inflammatory action in more superficial and more tangible glands." 518.

Some cases of hepatic abscess are given in detail by our author, as illustrations; and then he proceeds:—

"When acute attacks of hepatitis are not subdued by sufficiently decisive treatment in their early stages, they run rapidly into abscess. This consequence of the disease is chiefly to be dreaded when considerable enlargement of the viscus is found upon examination. If abscess actually be formed, and is seated in the convex part of the right lobe, the enlargement is evident over the whole hypochondriac region, the liver extending considerably below the ribs towards the umbilicus, and sometimes across the epigastrium to the left side. When the abscess is likely to point below the ribs, there are generally great tumefaction and increased heat of the surface of the part and its vicinity: frequently there is found a distinct enlargement, particularly in the more advanced progress of the abscess, immediately under the margin of the right ribs. If, however, abscess form on the superior surface of the liver, and point upon the diaphragm, although the enlargement of the organ will be very perceptible, yet there will seldom be felt any great increase of temperature on the surface of the hypochondrium. The abscess may point between the ribs; in this case, a bulging of the false ribs will be observed, and more than usual fulness of the intercostal spaces, and increased heat in this situation, with considerable enlargement, the liver being felt below the right hypochondriac region, in the epigastrium, and sometimes in the left hypochondrium. This enlargement may exist for a considerable time before matter forms; but in this case there will be no distinct tumour nor increase of heat: when the abscess has advanced considerably to maturity, the undefined enlargement and tumefaction become even diminished, and distinct tumour is more observable, according to the situation of the abscess and the direction which it may take.

"When the abscess is completely formed, and is seated in the superior and posterior part of the liver, the enlargement and tumefaction felt beneath the ribs, previous to, and during the formation of matter, become considerably diminished; but if it be in the inferior and anterior part of the organ, the enlargement becomes more and more reduced and circumscribed, until it assumes the character of a distinct tumour; and the pain, which was often considerable during the period of general enlargement or tumefaction, either altogether ceases, or is now but little felt. For further observations characterizing external pointing of abscess of the liver, we must refer our

readers to the section on treatment of abscess, and on the operation for abscess when it points externally." 527.

The formation of hepatic abscess is not always revealed by unequivocal symptoms, particularly when it supervenes on chronic inflammation, and complicated with dysentery. In such cases the matter may form without a single symptom usually denoting abscess of an internal organ. The disease is so complicated with aguish feelings, that rigours or horripilations are fallacious phenomena. In general, however, minute inquiry will detect the existence of slight shudderings or formications, in the absence of unequivocal rigours.

"Sometimes an internal sense of throbbing and fluttering has been felt in the region of the liver, and has been followed by a broad, soft pulse, and night perspirations. The supervention of night perspirations, with a clamminess of the skin of the extremities, is one of the most certain signs of the formation of internal abscess which we possess; but even this ought not to be relied upon alone, but should be viewed always in connexion with the other symptoms characterizing the case. The next in importance are frequent cold sweats, but these are chiefly met with in the advanced stage of abscess. Frequent fainting sensations are deserving of considerable reliance on the part of the practitioner. There are also generally much anxiety and oppression at the precordia, and restlessness. If, during the treatment of hepatitis, we find it a matter of difficulty to affect the system with mercury, vascular depletions having been previously practised with the requisite decision, we may then dread the existence of abscess. Whether or no the mercurial remedies employed may act in such cases, owing to peculiarities of constitution or diathesis, in producing and accelerating the suppurative process, is a question not readily admitting of decision; but there can be no doubt that the system will not be brought under the full operation of mercury, or that ptyalism will not follow upon the most energetic employment of this substance, when abscess exists, although a slight tenderness of the gums will be produced by it. This circumstance has been proved to us on very many occasions.

"When abscess is formed, the tongue is seldom or ever of a natural appearance. At first it is sometimes white, and the papillæ raised or excited: it afterwards becomes of a dusky, brick-coloured redness, or what may be called a beef-steak tongue. At other times it is dry, coated, and of a brown tinge. In the more chronic cases, it is often smooth, chapped, lobulated, and apparently deprived of its papillæ. When great mischief is going on in the liver, without any acute symptoms, the tongue is often an excellent guide, and more to be depended upon than the pulse. In many of the less acute or chronic cases of abscess, the tongue has a peculiar white appearance, with the papillæ raised or excited: it is somewhat dry, but without any coating. This is what we have called an excited tongue, be-

cause we have considered it a sign of great vascular excitement going forward in internal structures; and we have often ordered depletions from this symptom alone, the tongue becoming natural as soon as a full depletion was performed. Hence we have considered that, when this state of tongue is observed, depletions may be directed more safely than upon the indication of any other symptom. Care should, however, be had not to confound this appearance with a white and moist condition of the tongue, or with a white, yellow, or brown crusted state of this part. The pulse at the commencement of the formation of matter, is generally soft and full, is subject to acceleration in the evening, and as the organic change advances, becomes more irritable, quick, and contracted. The stools are always much disordered through the progress of abscess of the liver: they are generally more or less frequent, are scanty, and usually consist of a greenish, watery fluid, with a greenish froth, or a green, slimy scum, floating on their surface. Frequently there are also straining and tenesmus; and some blood, with mucus, is occasionally voided. The calls to stool are also, in many cases, most frequent during the night. In hepatic disease, terminating in abscess, and complicated with dysentery, both the small and large intestines become diseased,—first functionally, and afterwards organically; and the patient generally dies of the organic change produced chiefly in the large intestines, frequently before the abscess makes it way, either externally or into any other organ. In many cases of hepatitis, complicated with dysentery, more particularly when the hepatitis presents a chronic character, the termination of the inflammation in abscess is accelerated, if it be not altogether produced, by the sudden arrest of the dysenteric disease. In many other cases, as we shall have to show more fully when hepatic dysentery comes before us, the hepatic disease is not apparent until the dysenteric symptoms are subdued; but although the disorder of the liver was not evident, or did not excite notice, while the bowel disease was urgent, we are not on that account to infer that it did not then exist. On the contrary, we believe that in most of the instances of this description the liver was the original seat of mischief, which only became more severe and more apparent when the consecutive disorder was abated." 530.

When the abscess is seated posteriorly in the liver, and presses on the diaphragm, anxiety and præcordial oppression are urgent, with occasional dyspnœa or hiccup—when pointing towards the stomach, flatulence and vomiting are seldom absent. The easiest position is usually on the back—sometimes in the sitting posture. Pain is a very uncertain symptom. A pricking sensation is commonly felt where the abscess is pointing. The countenance is indicative of disease—it is sallow, sunk, the eye of a pearly hue—tongue white and excited—spirits depressed, sometimes even to melancholy—progressive emaciation

—quickness of pulse in the evening—bowels either relaxed or costive—motions morbid, "and always deficient of healthy bile," resembling soft clay or putty, with a peculiar fetor. In such cases we may infer, that the mischief is not yet very extensive, but that it will be not the less serious in the end.

"When, on the other hand, the symptoms are more acute, when the constitutional derangements are great, the tongue dry and smooth, the fever very considerable, and the functions of the alimentary canal much disturbed, and signs of dysentery present, then immediate danger is to be apprehended." 531.

Abscess of the liver may wear out the constitution before it breaks externally or internally—generally through the medium of a bowel-complaint. The appearances on dissection are very various, not only as regards the situation and extent of the abscess, but the colour, consistence, &c. of the purulent formation. The state of the surrounding parenchymatous structure is also very various. These varieties we need not dwell upon. Neither can we afford space for any of the numerous cases which are detailed by the author.

#### TREATMENT OF CHRONIC HEPATIC INFLAMMATION.

In our second analytical article on Mr. Annesley's work\* we took up the treatment of *acute* hepatitis, and, therefore, need not again go over that ground.

Mr. Annesley observes that, the chronic forms of hepatitis differ only from the more acute, in the duration of the disorder, "and in the texture of the organ, more generally the seat of the inflammatory action." In fact, he considers the division into acute and chronic as entirely arbitrary, and only to be adhered to as far as respects the "duration of disease." The therapeutical agents are ranged under the following heads.

I. *Vascular Depletion*.—Whether chronic hepatitis has resulted from the acute form, or been primary in itself, more or less vascular depletion will be necessary—chiefly local.

The extent must be left to the judgment of the practitioner. The vigour of the patient's constitution, the fulness or pain in the side, the febrile action in the system, and the length of residence in a hot climate, will afford the necessary indications. There are few cases, however, where repeated, though moderate leechings will not be beneficial. After each leeching Mr. A. recommends a poultice to the side, and an aperient, consisting of calomel at night, and black draught in the morning. When the morbid action of the liver is lessened by these means, and the morbid secretions carried off, the calomel may be changed for a milder preparation, as blue-pill, or the hydrargyrum cum creta, with saline and antimonial aperients. Bowel-complaints are very common attendants on chronic hepatitis.

\* Vide Journal of Foreign Medicine, Vol. III.

"When such is the case, enemata, either of a purging or of an emollient nature, should be administered, and the pulvis ipecacuanha comp. given in combination with the blue-pill at bed-time, and be followed by a dose of castor oil in the morning. In many of these cases, much advantage will be derived from the use of a flannel bandage kept constantly applied round the abdomen; and the local depletions which have been practised may be followed by blisters on the epigastric or hypochondriac regions, and these by the nitro-muriatic wash, until a healthy state of the secretions be brought about." 627.

II. *Nitro-muriatic Solution.* After the removal of acute symptoms by the means already pointed out, Mr. Annesley strongly advocates the use of this remedy, which English practitioners have strangely neglected—or rather rejected, without cause. We are in the habit of prescribing it frequently—and we are as certain of its effects on the system, as we are of jalap or calomel. The following is Mr. A.'s formula for the solution.

"The nitro-muriatic solution, lotion, or bath, may be made in the following manner:—Into a common quart bottle put about eight ounces of pure water, to which add four ounces of the nitric acid, and four of the muriatic acid, of the strength of the London Pharmacopœia. The '*Nitro-muriatic Solution*' is thus formed, and the bottle containing it ought to be labelled accordingly. If it be intended to use this solution in the form of a bath, from two ounces of it to five, according to the strength of the patient, may be mixed with from two and a half to three gallons of warm water, of a temperature nearly approaching that of the blood, in a high and narrow vessel, and the feet and legs kept immersed in it for about twenty minutes or half an hour, every night before retiring to rest. If the bath does not occasion a pricking or itching sensation in the parts immersed, after twenty minutes have elapsed, the next bath should be increased in strength. Although we have frequently employed this bath, and generally with advantage, we prefer, in many respects, the practice of sponging the trunk of the body, particularly the abdomen, with the nitro-muriatic wash.

"When the nitro-muriatic solution is to be employed in the form of a wash, from two to three drachms of the *Solution*, prepared as just stated, should be added to a pint of warm water, and the trunk of the body, insides of the thighs, &c. assiduously sponged with it, by means of a large sponge, for about a quarter of an hour daily, or, occasionally, night and morning. We have found great advantage from employing this solution also in the form of poultice, in torpor of the liver and in chronic affections of the organ, attended with enlargement, and a deficient and morbid state of the biliary secretion. Occasionally much benefit will arise from employing this wash in the form of fomentation; the water having been made as hot as 130° or 140° of Fahrenheit, when the acid solution is added. When

this is practised, the flannels soaked with the wash should be applied for an hour or two every night. It may be employed, also, with advantage by keeping cloths wet with the solution over the hypochondria and abdomen, and placing over them warm poultices; both the moistened cloths and the poultices being renewed from time to time." 628.

Mr. A. assures us, and we believe him, that he has seen the most decided advantages result from this remedy in chronic hepatitis, "and, indeed, in all functional disorders of the liver." In the more chronic forms of disease of the liver, he observes, particularly where the structure is enlarged, and the biliary and intestinal secretions vitiated, "I consider it one of the most valuable remedies we possess." It should be continued two, three, or four weeks, unless it fulfils the intention before that time. It would almost appear that this remedy has been rejected by English practitioners in consequence of that devouring rage for POLYPHARMACY, which is at once the bane and disgrace of British medicine! When the day arrives (and arrive it must) that will award the remuneration for skill and attendance instead of drugs, then will the *external* remedies be more employed—and the nitro-muriatic solution again come into favour. Mr. A. cautions us against the employment of mercurials during the use of the solution; but recommends purgatives to carry off diseased secretions.

"We have frequently observed, after it has been employed for a few days, that the patient has complained much of heaviness or drowsiness. When this is the case, active purgation should be instituted, in addition to the use of the solution, which will soon bring away morbid and offensive stools, and remove this symptom of disorder." 629.

Change of air, or a sea voyage, will often materially assist the salutary operation of the acid bath.

III. *Nitrous Acid.* This medicine has been a good deal employed internally, as an alterative, in hepatic diseases. As much as six drachms of the diluted nitric acid, in a large quantity of barley or rice water, may be taken in 24 hours. In the course of a few days it induces a slight salivation; but its beneficial effects are often observed from smaller doses, and without the salivary excitation. This medicine requires a longer administration than mercury, in order to insure its full operation. There is no incompatibility in the use of this medicine with mercury. Indeed, it is the opinion of Sir James M'Grigor, as well as of our author, that the conjoined administration of both, is superior to that of either singly.

To attempt to impregnate the system with mercury, in the active forms of hepatitis, or in many cases of the chronic form, before the inflammatory action is, to a certain extent, subdued, leads, Mr. A. thinks, to want of success—nay, to positive injury. These objections do not apply to the nitrous acid, or to the nitro-muriatic bath; for, although these last are more serviceable after antiphlogistic

measures have been employed, their premature use is not attended with any detriment.

IV. *Blisters, Setons, &c.* Blisters, of course, are not to be employed in the more acute forms till after depletion, on the same principle as in pneumonia, or any other internal inflammation. Afterwards they are salutary. In the more chronic and protracted cases, the drain of a seton or issue is more effectual. After a discharge has been established, Mr. A. recommends poultices to the part. We are a little surprised that Mr. A. does not mention the counter-irritation and purulent discharge produced by tartrate of antimony, an application extremely beneficial, and capable of being repeated from time to time without the constant inconvenience and pain of a seton. Tartar-emetic plaster is much superior to the ointment.

V. *Tepid and Vapour Baths.* These are serviceable in the course of the disease, whether in the active or chronic forms. In the latter, they should be followed by frictions, either with a coarse towel or flesh-brush, over the region of the liver, and, indeed, over the abdomen generally. The sulphur and chlorine baths are still more serviceable.

VI. *Eccoprotics.* "In the more chronic cases of hepatic disease, in addition to the external means already recommended, and particularly after local depletions have been resorted to whenever pain or uneasiness in the region of the liver manifested itself, a gentle aperient pill should be taken at bed-time, and saline laxatives through the day. The best pill which we can recommend for this purpose is that composed of the aloes and myrrh pill and blue pill, or the following:—*R.* Hydr. submur. ℥j.; extract. colocynth. comp. ℥ij.; antim. tartar. gr. j.; pulv. ipecac. gr. jv.; sapon. Castil. gr. x.; ol. car. q. s. *M. ft. pilul.* xvij. Two of these will generally be found to operate sufficiently, and may be taken every night at bed-time, or every other night. In the majority of cases, however, one of them will prove sufficient, particularly when it is intended to continue the use of them for a considerable time, and when saline or other laxatives are also required through the day. Where the chronic disease of the liver is attended with enlargement, it will generally be found requisite to prescribe the above pills every night, the nitro-muriatic wash being employed externally night and morning; and a weak solution of the sulphates of soda, magnesia, and potash, either singly or combined, may be given in the morning, and, if necessary, again at mid-day, in order to keep up a gentle action in the large secreting viscera and bowels. If, however, a weak solution of these salts should occasion frequent and watery motions, with tenesmus, they may be changed for the solution of cream of tartar in tamarind water, or for the solution of the soda tartarizata, or the tartras potassæ. On many occasions, the factitious Cheltenham or Harrowgate salts may be given with advantage; and the Seidlitz powders may also be taken occasionally. Much benefit will generally accrue from

changing, after a few days, the saline substances prescribed, particularly if the exhibition of the eccoprotic pill at bed-time, and the salts through the day, produce any degree of tenesmus. The cream of tartar solution may, however, be given and continued for a longer time, without any risk of inducing this effect. If tenesmus occur, an emollient enema will always afford relief, and the medicines may be intermitted for a day or two." 635.

From considerable experience in this class of complaints, we would suggest a modification of the above eccoprotic pill, which we have found to be an improvement. We would substitute the pilula hydrargyri for the calomel, and we would double the quantity of the tartrate of antimony. As there is often much irritation prevailing in the bowels, and in the system generally, three grains or four of extract of hyosciamus at bed-time, will be found a very useful adjuvant.

VII. *Bitters, Tonics, &c.* The continued operation of deobstruents—the defective nutrition—the impaired digestion—the irritative fever which more or less obtains—all these tend to produce great languor, debility, and irritability, in the hepatic invalid. On these accounts, it is very generally necessary to combine bitters or even tonics with the alterative or deobstruent remedies, in order to support the strength and improve the digestive and assimilative processes. The infusions of calumba, gentian, chamomile, with some tincture of the same, and soda, are the usual forms of bitter medicines—to which is to be added the taraxacum. We are very much surprised that this remedy does not enter into the catalogue which Mr. Annesley has laid before his readers. As his experience has been almost entirely confined to India, where the taraxacum is little used, Mr. A. probably is practically unacquainted with its effects. But the more it is employed, the more certain proofs will it afford of its utility. The aperient and diuretic qualities of this root are unquestionable. The following will be found a very convenient, and not an unpleasant formula.

*R.* Decocti taraxaci. ℥iv. Carb. sodæ, ℥j. Extr. taraxac. ℥ij. Tinct. gent. c. ℥ij. Misce dat mistura, capiat coch. ij. vel. iij. mag. bis fie.

Although tonics are precarious medicines, and can rarely be given while any inflammatory action is going on in any of the chylipoietic organs, yet a period sooner or later arrives when they become necessary, and are then highly beneficial. They should be preceded by bitters, and their doses should be very small at the beginning. It is by giving too much for a dose, or too many doses in the day—or by exhibiting the tonic at an improper time, that mischief is done. Thus many people will derive advantage from half a grain of sulphate of quinine in a drachm of compound tincture of gentian taken *directly after dinner*, whose stomachs would be irritated or too much excited by the same dose, an hour before dinner, or two or three times in the day. But the

unfortunate mode of medical remuneration in this country, destroys very often the efficacy of a medicine by the manner in which it is obliged to be administered.

Mr. Annesley has evidently a *hobby* in the shape of purgation. In India, where the biliary apparatus is goaded to inordinate and morbid secretion, by the heat of the climate, and the stimulation of diet and drink, purgation is necessary, even to the amount prescribed by our author. But in this country, where the liver is generally torpid, and the stomach and bowels irritable, the drastic purgation recommended by Mr. Annesley, would be found a very inconvenient, if not a detrimental practice. The diet and regimen of an

hepatic patient require peculiar attention—more than we can speak of in this place. Mr. Annesley has touched very lightly on this important subject—and he seems to have entirely overlooked the salutary effects of TRAVELLING in diseases and disorders of the biliary and chylopoietic organs. This item would often do more for the Indian invalid than the “purg-ing discipline” (to use a favourite expression of Mr. Annesley) which is so strenuously recommended in the great work under review. But we must now bring this article to a close. We shall take up another subject, in the course of our next number, and pursue our analysis till we exhibit a complete view of these two costly and highly valuable volumes.

### Medical and Philosophical Intelligence.

*Description of the Rudiments of a Fœtus, extracted from the Testicles of a child seven months old.* By Dr. WENDT, of Breslau. In the neighbourhood of Glogau, in Silesia, the wife of a labourer was in December, 1827, delivered of a healthy male child, which during six months enjoyed good health; but having after this period been affected with dysuria, was found to have a hard swelling of the left testicle, and congenital phymosis. The latter having been removed by the operation, the testicle rapidly increased in size, so that the scrotum at last hung down to the knees; the tumour had an uneven surface, was very hard, and tender on pressure, and as it continued to grow, was on the 9th of July removed. The ligature came away on the 12th, and the wound was completely healed by the beginning of August.

The extirpated testicle was four inches and a quarter in length, and two and a quarter in diameter; it weighed seven ounces, and its parenchyma was infiltrated with a greasy, ichorous matter, of a yellow colour. No trace of the epididymis could be found. The tunica vaginalis being opened, a solid oblong body was exposed, and on a closer inspection, found to be a thigh bone, without its periosteum, one inch and a half in length; in the circum-jacent tissue, the rudiments of several other bones were found, which on a more accurate examination proved to be the pelvis of a fœtus at the fourth month; the os coccygis was very much curved; the sacrum terminated in a ligamentous mass, which appeared to represent the rudiments of the lumbar vertebræ. The head of the right thigh-bone was much compressed, without any trace of the neck, although two prominences, resembling the trochanters, were visible; its lower end terminated in two tuberosities, representing the internal and external condyles. The left os pubis and the ischium were totally wanting; the ilium, which was well formed, had attached to its semicircular line the left thigh bone, which was only three-fourths of an inch in length, and its lower extremity bent backwards; the tibia were almost entirely cartilaginous, and were separated by a very thick

inter-osseous ligament; the foot was represented by a confused cartilaginous mass, without any distinct traces of toes. No other rudiments of any fœtal organs could be found in the testicle, the substance of which was not in a morbid state, except from mechanical pressure. The child from which it had been removed was, five years after the operation, in the enjoyment of excellent health.—*Bull. des Sc. Méd.*

*Delivery of a Fœtus through the Abdominal parietes.* (*Magazin für die gesammte Heilkunde*, 1828, xxviii. i. 157.)—A female, thirty-three years of age, feeble in constitution, and of middle stature, in the advanced stage of her first pregnancy, fell from the height of a story on a stair. After recovering from the fainting fit, which was the cause of her fall, she felt violent pain in the lower belly, and had considerable uterine hemorrhage. These affections were removed by antiphlogistic treatment; but left her in a state of extreme debility. Four weeks after the accident she was seized with severe contracting pains like those of labour; and on manual examination, it was found that the *os uteri* was puffy and open. The apparent labour, however, did not make any progress. There was at the same time a copious discharge of sanguinolent mucus, constant sickness, extreme prostration of strength, hurried pulse, general paleness, and uninterrupted perspiration. The patient had never observed any movement of the fœtus after she met with the fall. Several days having been passed in these unfavourable circumstances, an inflammatory tumour suddenly appeared in the region of the umbilicus, accompanied with most acute pain and an intolerable sense of burning. The passages continued moist, but the *os uteri* did not increase in openness. Seven days after the false labour-pains appeared, the tumour opened and discharged a moderate quantity of fetid pus. In the course of the same day, when the aperture had attained the diameter of an inch, the hip of a fœtus presented itself. This was in so advanced a state of putridity, that it was easily separated from the body; but it

was with difficulty extracted from the opening. The thigh and foot followed, and after them the chest, of which the ribs, sternum, and clavicles, were successively removed with a pair of lithotomy forceps. The arms were next extracted, then the bones of the head, after being broken down with the crotchet; and, in short, every bone of the fœtus was withdrawn from the same opening. A slimy membrane, and a light, spongy, cheesy mass, in small portions of various sizes, consisting evidently of the placenta and membranes, were in the last place separated. During the progress of this extraordinary delivery, which lasted two hours, the uterus contracted occasionally with considerable force. The patient suffered much from the irritable state of the abdominal aperture. The sore was dressed with dry lint, after an injection had been used of tepid-water and chamomile infusion, *which passed through the vagina*. The lochial discharge flowed partly through the natural passage, and partly through the aperture in the abdomen. Under the use of generous diet, the patient, notwithstanding her unpropitious condition, gradually recovered. The discharge, which had at first and for some time an insupportable stench, gradually lost its odour; the wound in nine days had closed so far as only to admit a quill; and the secretion of milk receded. The patient's appetite and sleep continuing good, and her mind calm and cheerful, her farther recovery proceeded with rapidity. In six weeks the opening was healed up altogether, and she was able to resume her household occupations in her usual state of health. —Dr. Müller, to whom this singular case occurred, has appended a few remarks on its nature, and endeavours to establish that it was not an instance of extra-uterine gestation, but of ordinary pregnancy; that the accident must have excited inflammation and suppuration of the anterior surface of the uterus; that this disorder passed by continuity of surface to the abdominal parietes, and gave occasion to the false passage. This certainly appears the only rational account that can be given of the progress of the case. The complete recovery of the patient in such disastrous circumstances is certainly, as the author observes, a most extraordinary instance of the restorative powers of life. "Nature, too, has her Cæsarean operation!" —*Ed. Med. and Surg. Journal*.

*Cases of Emphysema of the Intestinal Canal.*—The patient, a woman, thirty years of age, of strong constitution, who had been employed in grinding colours, was admitted into la Pitié, to which she had come on foot, complaining of slight colic pains, with some degree of constipation; for some time she had been subject to frequent vomitings of bilious matter; there was no tension, nor pain in the abdomen increased on pressure, and the tongue gave no indication of disease. The lightness of her symptoms seemed to require no active measures, and an emollient treatment was adopted. She complained also, of pain in her loins and hips, which induced the sus-

picion of uterine disease, and an examination was proposed, when she was attacked on the third day of her admission, with very acute pain in the abdomen; the trunk was bent backwards, and the whole body thrown into a state of agitation; she died in a few hours, preserving her intelligence to the last.

On dissection, the mucous membrane of the stomach and small intestines, and the corresponding portions of the peritoneum, were found unequally elevated, forming embossed tumours, without redness, transparent, slightly crepitating when pressed by the finger, and containing gas, which could with difficulty be made to change its place; when cut into, they did not collapse completely, unless pressure was applied. Some rose-coloured arborizations were observed on the small intestines. The liver was greenish and soft. The contents of the thorax were sound; in the cerebro-spinal system, posteriorly, between the dura mater and the vertebrae, there was a recent extravasation of coagulated blood, extending from the fourth cervical, to the fifth dorsal vertebra.

CASE II. A labourer, aged 52 years, entered la Pitié, in August last, with a severe quotidian fever, which had continued for eight days. On his admission, there were some symptoms of gastric derangement, such as anorexia, bitter taste in the mouth, furred tongue, but no fever. Fifteen grains of ipecacuanha were directed, which was speedily followed by vomitings, and faintings; the patient soon recovered his senses, but was in a state of such agitation, that he was with difficulty prevented from falling from his bed. He died the next morning.

On dissection, the stomach alone was found diseased; the mucous membrane of this organ, particularly towards its smaller extremity, was elevated by gas into an embossed, irregular, and transparent tumour, which crepitated slightly when pressed; when an incision was made into it, it did not empty itself completely, unless upon pressure or immersion in water. There was no morbid redness of the intestinal canal.—*La Lancette Française*.

*Employment of Morphine as a corrective of Iodine.*—M. Pelletan has recently published an interesting case which seems to prove, that morphine is the best method of obviating the inconveniences which result from the preparations of iodine. He was in attendance upon a woman from whom his father, several years previously, had removed a large scirrhus tumour from the breast. The disease returning, iodine was employed externally, but having been productive of some very unpleasant symptoms, the acetate of morphine was added, in the proportion of eight grains to six grains of the proto-ioduret of mercury; and one ounce of axunge frictions with this ointment, for the space of three months, effected a complete resolution of the gland, and also removed a considerable engorgement of the uterus; which supervened about the termination of the first disease.—*Gazette de Santé*.

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